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# HOUSING EXPENDITURES: A LOOK AT HOW DEMOGRAPHIC FACTORS INFLUENCE THEM

# HOUSING EXPENDITURES: A LOOK AT HOW DEMOGRAPHIC FACTORS INFLUENCE THEM

by

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## Abstract

An examination of the relationship between household spending on shelter and the demographic and other characteristics of the household demonstrates that there is a relationship between both demographic and non-demographic characteristics of the household and the level (both absolute and as a proportion of before-tax income/total expenditures) of spending on shelter. The 1978, 1982, 1984 and 1986 Surveys of Family Expenditures provide the data for the analysis. Both micro and multivariate analyses are carried out, permitting an examination of those household characteristics which are most important when other factors are controlled.

Families in which the household head is over age 69, families in the lowest income quintile, unattached individuals, families in which neither spouse works, and certain immigrant arrival periods can be associated with spending on shelter of more than 30 percent of total expenditures. As demographers have indicated there is likely to be, in the future, more elderly, more unattached individuals, and more immigrants, policy makers may find value in targeting shelter or income assistance to those households exhibiting these characteristics. As demographic structure changes, it may well influence spending on accommodation and on the living quarters/tenure decision.

## Summary

This study examines the relationship between demography and householder's spending on shelter in Canada from the perspective of two questions: (1) Do different demographic groups allocate different amounts of total household consumer spending or of total household income before taxes to shelter? and (2) If they do, are these differences caused by non-demographic variables such as place of residence, education, or income, or are they caused by the demographic differences themselves? The study conclude that yes, there are differences by demographic group, and yes, both demographic and non-demographic variables play a role in explaining these differences. The data used are the individual households that make up the Survey of Family Expenditure in 1978, 1982, 1984, and 1986; because the 1984 Survey includes only households that live in cities of 100,000 or more, only households in that city size are included from the three other Surveys in Chapter 4. The main demographic variables include household head's age, country of birth, and gender, along with the household's family composition. In some analyses, the household's size is also included.

The proportion of either income before taxes or total expenditures allocated to shelter follows a "U" shaped pattern by age group; households with heads age under 30 or over 69 have higher allocations than heads with ages between those years, with those over 69 having the highest proportions. This is the case for all four years. Across the four years, the proportions are quite constant from 1982 to 1984 to 1986 for all age groups, but the proportions for 1978 are quite low by comparison. The differences from one age group to the next in part reflects the fact that the youngest and oldest households have relatively low incomes; when the age groups are compared for the same income quintiles, the proportion of total expenditure allocated to shelter is now lower for households with heads aged under 30 than for heads whose age is in the 30s. There is also not as sharp a break between the older aged households and the middle aged households. For all age groups, the proportion of total expenditure allocated to shelter falls as income rises. The original "U" shaped pattern remains when the age groups are compared across Canada's regions or for different municipal sizes as well as urban-rural residence. In general, one region is not consistently a higher allocation region than others across age groups or years. For most age groups, living in an urban area leads to higher proportions than in a rural area, with centres of 100,000 or more people experiencing the highest proportions in all four years.

Looking now at family composition, shelter expenditures are highest in proportion to total expenditure or before-tax income for those who are unattached or who head single-parent families. When a couple has young children in the household, the proportion of spending of income allocated to shelter rises noticeably as compared to married couples only, but as the youngest child ages, both proportions decline until, when the youngest child is 16 years old or older, both proportions are well below even the married only allocation.

In general, the foreign-born allocate more of income before taxes or of total expenditures to shelter than do the Canadian-born, with the highest allocations found among household heads born in Britain, the United States,

Northern Europe, or Western Europe. It is hard to generalize, but households with heads born in Asia may allocate a lower proportion to shelter whereas other heads born in Third-World areas may allocate more than the foreign-born in general. More recent arrivals to Canada also appear to allocate higher proportions of total expenditure or income before taxes to shelter than more distant arrivals, although no clear pattern emerges.

In contrast, it is quite clear that households headed by females allocate significantly more of either income before taxes or total expenditure to shelter than do male headed households; this is true for all four years.

The data relating to region and shelter expenditures indicate that there are significant differences in both the proportion of before-tax income and total expenditures being allocated to shelter, with British Columbia and Quebec often being higher than other regions and Atlantic Canada having consistently the lowest proportions.

Shelter allocations are also examined by certain housing characteristics. Households renting their accommodation allocate considerably more as a percentage of their total expenditure than do those who own their own homes, and the amount spent as a proportion of total spending for those who have a mortgage is higher than for those who have no mortgage. Naturally from this apartment dwelling costs more as a proportion of total expenditures than does living in single family housing, and this is consistent throughout the four years covered. Allocations of total expenditure to shelter are highest with fewer bedrooms, only one bathroom, and fewer rooms overall, which are each consistent with the other. By date of construction, people living in the newest and the oldest housing allocated a greater proportion of total expenditures to shelter than others.

Multiple regression analysis is used to examine the influence that the demographic variables have on the proportions while other variables like region of residence, head's education, head's mother tongue, total household expenditure, type of living quarters, and class of tenant are held constant. In most cases, the relationships that have already been described still appear; the only exception is perhaps the head's birthplace, which appears not to now be very important. The probability of being an owner or a tenant is all studied with probit analysis; the probability of being a tenant is higher for unattached individuals, lone-parent families, married couples only, younger aged heads, lower incomes, small households, recent immigrants, and households in Quebec. Regressions are also used to look at income elasticity of demand (i.e., the percentage change in household spending on shelter from a one percent change in household income) across demographic groups; elasticities are higher in comparison to obvious groups for the foreign-born, the foreign-born who arrived a while ago, older age groups, female headed households, lone-parent families, married couples with children, and the lowest income groups.

With the differences across demographic groups, it would be possible to use them to project what might happen to allocations to shelter if Canada's demographic structure changes. For example, there are signs that the average age is rising, that more lone-parent families and female headed households are appearing, that the proportion of the population that is

foreign-born may rise, and that households are smaller in size. This type of projection must be done with caution since tastes and preferences, technology, and price structure might be different in the future.

Various agencies have suggested that policies should be implemented to help households that allocate 30 percent or more of total expenditure to shelter. Some household types fall into this category, although not always in all four years, namely households with heads over age 69, lowest income households (but often specific to age groups), unattached individuals, recent immigrant groups, and households where neither spouse works. Of course, some of these types overlap (e.g., unattached individuals who are female heads with relatively low incomes), and the circumstances that caused the 30 percent figure often differ amount the types. Finally to return to the theme of this study, demographic variables appear to be important determinants of the proportion of either income before taxes or total expenditure allocated to shelter. As demographic structure changes, it may well influence spending on accommodation and on the type of residence that is required.

# CHAPTER 1

# INTRODUCTION AND LITERATURE REVIEW

## INTRODUCTION

This study aims to bring together two important aspects of Canada's social and economic situations in the 1980's, namely changes in its demographic structures and changes in its expenditures on shelter. Several changes in demographic structure have been underway for at least a decade: the aging of the population, a decline in fertility rates, smaller families, more single-parent households, more women working outside the home, changes in the source country of Canada's immigrants, and perhaps the tendency for the proportion of the population that is foreign - born to rise and a policy designed to make it rise further. These changes have been documented by other researchers (see Beaujot and McQuillan; Foot; Denton and Spencer; Dumas; Romaniac; McDaniel; Miron, 1988). Since households and individuals with different demographic characteristics are hypothesized to allocate different proportions of their total expenditure on goods and services to shelter expenditure (Marr and McCready, 1989), it is likely that the demographic changes already have and will in the future affect total shelter expenditure.

This study examines the relationship between a household's demographic characteristics and its expenditure on shelter. In the first instance, the absolute amounts spent on shelter by the household are presented according to various demographic characteristics, namely age groups, birthplace, and family composition. Total shelter expenditure can be broken down into amounts spent on rented living quarters, owned living quarters, and water-fuel-electricity; the amount spent on owned living quarters can be further

subdivided into the amounts spent on maintenance, property taxes, insurance premiums, and mortgage interest. Perhaps of more interest, the total shelter expenditure per household can be related to the household's total expenditure on all goods and services (a proxy for permanent income) and to the household's income before taxes. These relative sources of shelter expenditure will then be compared by households' demographic characteristics.

In addition, there are a number of other factors which influence spending on shelter including income class, where one lives, one's educational background, living quarters occupied, and tenure. These are not demographic factors although certain demographic groups also tend to be characterized as being from particular income classes, education groupings, and so on.

Assuming that differences among demographic characteristics are found, what factors or influences cause these differences? There are two possible general causes: (1) the demographic differences themselves (e.g., older heads of households have different relative shelter expenditure patterns just because they are older, all else the same), and (2) common non-demographic factors that affect spending patterns such as income, education, household's location, etc. This study uses micro analysis followed by regression analysis in an attempt to separate the demographic from the non-demographic influences. It is also interesting to look at how responsive expenditures on shelter are to changes in income for different demographic groups. Hypotheses for these income elasticities with respect to permanent income will be put forth and then tested using Canadian data.

All of the data in this study come from the 1978, 1982, 1984 and 1986 Surveys of Family Expenditure by Statistics Canada. In each survey, a sample of Canadian families was asked how they allocated this total con-

sumer expenditure among a large group of household items including shelter, as well as other questions related to the household's demographic structure. For each survey, it is possible to relate various demographic variables to each household's type of tenure and living quarters as well as to the total dollar expenditure spent on shelter. The household's income before taxes is also provided so expenditure on shelter can be related to its income as well as to total spending on all goods and services. Since the 1984 Survey includes only households that resided in cities of 100,000 or larger, for the regression analysis, the observations used from the other three surveys are also for households living in cities of that size. Therefore, these Surveys are a rich source of information and enable us to achieve our aim of linking demographic characteristics to Canadian household shelter expenditure patterns at four points in time.

## A SHORT REVIEW OF THE LITERATURE

Since this study examines the relationship between shelter expenditure and the household's demographic characteristics, only literature for Canada that deals directly with that topic will be mentioned here. Marion Steele (1979) examines both the ratio of housing value or rent to income and the elasticity of housing value to household income with data from the 1971 Canadian Census. She finds that the ratio of housing value or rent to income (there are two separate ratios) rise with the degree of urbanization or the size of the city in which the household resides. Her study also indicates that these ratios rise significantly if the head of the household is 65 years or older; she believes that this indicates a strong preference for space by the older households. With respect to elasticity, she finds that it is less than .5 in all areas and is higher in less urbanized areas;

there is no clear relationship between the household head's age and the size of the income elasticities, although heads 65 or older seem to have greater elasticities than younger heads of households. The elasticities for owners are higher than for renters, and elasticities increase when permanent income replaces measured income.

John Miron (1984) employs the 1978 Survey of Family Expenditure to examine if shelter expenditure varies by household characteristics, by the size and quality of the dwelling occupied, and by location of the household. He finds little systematic variation in shelter expenditure net of owner's mortgage interest payments across different demographic groups or in different geographic locations although there is some variation in average shelter expenditure when households are disaggregated by income. Shelter costs are influenced by the quality of the dwelling and by the size of the city in which the dwelling is located.

Miron examines how shelter expenditure varies with different income sources (head, spouse, other) and finds that it is more sensitive to some sources than to others; he suggests that this is related to the relative uncertainty of some income sources and asserts the importance of permanent income, ie., expected income over the long-run, which he then attempts to measure for the households in his sample. Shelter expenditure is related to several measures of ability-to-afford, and the incidence of households with a high ratio of shelter costs to ability-to-afford varies depending on the measure used. We return to this question in Chapter 5, which deals with policy issues.

In a later study, Miron (1988) reports some income elasticities from his 1984 study. In short, he finds low income elasticities for shelter expenditure, and concludes that there are only slight differences across

demographic groups. The numerical values of income elasticity are about 0.3, although lone-parent households have significantly lower elasticities (about 0.15 or 0.16).

William Marr and Douglas McCready (1989) use the Surveys of Family Expenditure for 1978, 1982 and 1984 to study the allocations of total household expenditure among thirteen broad consumption categories for various demographic characteristics of the household; one of the 13 categories is shelter expenditure. They find that the age group under 24 years allocates significantly less of its total expenditure to shelter than either groups aged 25 to 34 or 35 to 44, which spend the same proportion on shelter. However, those in age groups 45 to 54 and 55 to 64 allocate significantly less of their total expenditure to shelter than does the group aged 35 to 44. The proportion increases again for those 65 years and older. The foreign-born allocate more to shelter expenditure than the Canadian-born, with heads born in the United States, Northern and Western Europe having the highest allocations. For foreign-born heads, generally the longer they live in Canada the higher is their allocation to shelter expenditure. Households headed by females allocate a greater amount of total expenditure to shelter than households headed by males, while households where the spouse works outside of the household allocate less to shelter than other households. Since this work refers to proportions, either an increase in the numerator or a decrease in the denominator contribute to this result. Unattached individuals and single parent families allocate proportionally more to shelter expenditure, and married couples with young children allocate proportionally more than couples without children or couples with older children. These results from various bivariate relationships are then studied in a multivariate setting using

regression analysis. When certain non-demographic variables are held constant, there are still differences among households in the allocation to shelter expenditure by demographic characteristics such as age, year of arrival for the foreign-born, marital status, gender of household head, and family composition.

All of these studies point to the potential benefit of studying the relationship between expenditures on shelter at the household level and the household's demographic characteristics. They indicate that there will be differences in the household's allocation to shelter across demographic characteristics. If these differences persist and the demographic structure of Canada continues to change, then there would be an impact on total and relative shelter expenditure, which may or may not affect the demand for various types of living quarters. That is not addressed beyond a cursory explanation in this study.

Chapter 2 will address the question: What proportion of households' total expenditure and total income before taxes is allocated to shelter for different demographic groups? In a few cases, these proportions will be studied while controlling for other factors that influence shelter expenditure. Chapter 3 examines the proportions of total expenditures and total income before taxes for different tenures or types of living quarters. Chapter 4 turns to the question: What independent effect or influence do demographic factors have on the proportions when other influences are held constant? This examines the causes of the differences in those proportions. The final chapter draws out some of the implications from the statistical work in Chapters 2,3, and 4.

# CHAPTER 2

## MICRO DATA ON HOUSING EXPENDITURES: A DEMOGRAPHIC ANALYSIS

The characteristics of the population clearly affect consumption patterns. As the analysis progresses, a picture of the Canadian population and some of its salient demographic characteristics and their effect on the expenditure patterns on housing related items will be pieced together.

Specifically, it is important to look at the age and birthplace of the household head, year of arrival (if the household head is foreign born), family structure, education and sex of the household head, as well as a number of other factors such as income and locations. For some of these factors, it is possible to compare them across the four time periods. Other factors like education, income level, size of the location of the residence, language, and region can also be explored in order to put some perspective on the demographic influences.

A complex interaction of demographic and non-demographic variables influence aggregate consumption for all goods and services. If economic growth slows, demographic effects might become more important than other effects and, thus, greater awareness of the relationship between consumption and demographic effects is required.

Research can use aggregate relationships that add in demographic factors such as family size or age as explanatory variables. Alternatively, one can estimate demand and consumption relationships at the household level and then form an aggregate by using demographic weights.

This study adopts the second approach, by studying the consumption patterns of individual households using micro data. The micro analysis addresses the issue of different consumption allocations for different birthplace, age, family structure groups as well as for different geographic factors. These micro data can be aggregated to study the overall total consumption propensities for the same variables.

In previous work done by the authors, it became clear that housing expenditures were relatively large (the largest portion of a household's total expenditures was allocated to shelter) and those expenditures as a proportion of total spending varied by demographic factors [Marr and McCready 1989a Tables 3-3 to 3-17]. While shelter expenditures were not broken down in that study, it was clear that further exploration would be useful.

In particular, it was noted that overall shelter expenditures exceeded 30 per cent of total expenditures when the head of the household was over 65 years of age, when there was one adult and one or more children (age 16 or under) in the household, and when a female was head of household (no spouse present). There were also immigrant groups with low levels of education that had more than 30 per cent of total spending allocated to shelter. It was a desire to look more closely at the factors which impacted the spending level on shelter and where most of that money was being allocated that prompted an interest in carrying out this study.

## DEMOGRAPHIC CHARACTERISTICS

### AGE

Table 2-1 sets out the mean absolute expenditures on housing for each of the four years according to age. Table 2-2 describes the proportion of

before tax income allocated to housing and related items and Table 2-3 shows the proportion of total expenditures spent by the spending unit (SU) [a spending unit or SU is usually a family unit but could also be an unattached individual living alone or several unattached individuals living together] on shelter and its components. The proportions take on some meaning when it is considered that the base represents some measure of ability-to-pay, although not a measure on which there is a great deal of agreement.

In Table 2-1, the peak expenditure on shelter costs occurs for those units in which the head of household is 30-39, except in 1986 when the 40-49 year-old household heads have a slightly higher absolute level of expenditures.

There is some difficulty in comparing across the four time periods since the data collection and definitions change somewhat, particularly between the 1978 and 1982 periods. In particular, the 1978 data do not include a number of the variables that the other years include. As noted in Table 2-1, principal accommodation, rent, contract and labour costs, shelter materials, and traveller materials are missing. Moreover, in later tables, it will be noted that the categories of family composition change as do the number of regions (in 1986 Alberta is separated from the other Prairie provinces). These changes are noted as required.

Shelter, in these tables, refers to total expenditures on principal accommodation as well as expenditures on all other accommodation. In other words, for the FAMEX data set, shelter expenditure is the aggregate of all expenditures made by the SU during the year. Where the SU is a combination of more than one SU at the start of the year, the expenditures are combined and consequently the same unit could have both rental and ownership expenses. The latter would also be the case where the unit moved during

**TABLE 2-1**

**MEAN ABSOLUTE HOUSING EXPENDITURES BY AGE**

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | < 30 | 3096.01 | 4582.76 | 5808.05 | 5527.70 |
| | 30-39 | 3973.01 | 5740.69 | 6765.08 | 6717.47 |
| | 40-49 | 3445.13 | 5551.23 | 6528.56 | 6795.38 |
| | 50-59 | 2824.30 | 4473.54 | 5256.27 | 5489.98 |
| | 60-69 | 2222.30 | 3421.45 | 4385.20 | 4395.05 |
| | > 69 | 1740.86 | 2924.65 | 3829.69 | 3666.40 |
| Principal Accommodation | < 30 | .. | 4433.82 | 5035.98 | 5357.89 |
| | 30-39 | .. | 5498.17 | 6497.16 | 6443.58 |
| | 40-49 | .. | 5122.99 | 6082.54 | 6226.15 |
| | 50-59 | .. | 4070.90 | 4807.56 | 4930.09 |
| | 60-69 | .. | 3185.85 | 4052.20 | 4009.26 |
| | > 69 | .. | 2785.18 | 3672.57 | 3501.90 |
| Rented Living | < 30 | 1528.88 | 2368.98 | 3253.74 | 3074.01 |
| | 30-39 | 820.44 | 1296.58 | 1990.48 | 1867.84 |
| | 40-49 | 591.27 | 872.62 | 1467.43 | 1267.81 |
| | 50-59 | 550.17 | 750.85 | 1324.19 | 1090.74 |
| | 60-69 | 587.51 | 789.97 | 1307.11 | 1109.58 |
| | > 69 | 572.65 | 1111.55 | 1764.85 | 1649.55 |
| Rent | < 30 | .. | 2298.90 | 3175.77 | 3001.07 |
| | 30-39 | .. | 1241.51 | 1936.64 | 1816.09 |
| | 40-49 | .. | 835.10 | 1406.69 | 1225.60 |
| | 50-59 | .. | 715.82 | 1274.30 | 1059.10 |
| | 60-69 | .. | 748.16 | 1239.71 | 1080.08 |
| | > 69 | .. | 1073.97 | 1713.08 | 1599.12 |
| Owned Living Quarters | < 30 | 1074.96 | 1463.33 | 1239.9 | 1592.64 |
| | 30-39 | 2313.59 | 3210.13 | 3502.35 | 3456.71 |
| | 40-49 | 1833.18 | 3055.90 | 3396.75 | 3608.60 |
| | 50-59 | 1317.45 | 2183.33 | 2294.60 | 2520.81 |
| | 60-69 | 851.10 | 1404.00 | 1749.09 | 1754.24 |
| | > 70 | 560.83 | 912.78 | 1130.76 | 997.64 |
| Maintenance, Repairs and Replacements | < 30 | 151.67 | 111.83 | 129.22 | 162.48 |
| | 30-39 | 361.30 | 286.68 | 376.61 | 381.31 |
| | 40-49 | 365.63 | 406.03 | 462.80 | 500.89 |
| | 50-59 | 357.06 | 391.07 | 424.70 | 458.26 |
| | 60-69 | 289.25 | 322.88 | 466.54 | 410.09 |
| | > 69 | 215.18 | 275.02 | 283.66 | 270.77 |

**Table 2-1** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Contract and Labour Costs | < 30 | .. | .. | 73.13 | 71.74 |
| | 30-39 | .. | .. | 246.02 | 218.09 |
| | 40-49 | .. | .. | 294.47 | 291.70 |
| | 50-59 | .. | .. | 319.28 | 335.40 |
| | 60-69 | .. | .. | 379.04 | 312.72 |
| | > 69 | .. | .. | 239.58 | 228.31 |
| Shelter Materials | < 30 | .. | .. | 56.10 | 90.74 |
| | 30-39 | .. | .. | 130.58 | 163.22 |
| | 40-49 | .. | .. | 168.33 | 209.19 |
| | 50-59 | .. | .. | 105.43 | 122.86 |
| | 60-69 | .. | .. | 87.49 | 97.37 |
| | > 69 | .. | .. | 44.08 | 42.46 |
| Property Taxes | < 30 | 141.91 | 199.66 | 187.70 | 247.06 |
| | 30-39 | 402.76 | 549.48 | 648.16 | 646.79 |
| | 40-49 | 478.01 | 748.78 | 847.09 | 901.13 |
| | 50-59 | 441.75 | 719.30 | 825.99 | 887.38 |
| | 60-69 | 341.79 | 581.84 | 696.89 | 750.89 |
| | > 69 | 253.51 | 420.73 | 527.59 | 468.77 |
| Homeowners Insurance Premiums | < 30 | 31.69 | 63.54 | 47.86 | 73.58 |
| | 30-39 | 76.13 | 154.97 | 154.46 | 176.59 |
| | 40-49 | 84.67 | 210.61 | 203.16 | 240.43 |
| | 50-59 | 83.64 | 194.05 | 205.85 | 239.18 |
| | 60-69 | 68.07 | 155.08 | 169.98 | 203.22 |
| | > 69 | 51.83 | 106.61 | 133.18 | 129.53 |
| Mortgage Interest | < 30 | 677.55 | 965.40 | 763.93 | 885.30 |
| | 30-39 | 1352.05 | 2032.23 | 2028.58 | 1900.37 |
| | 40-49 | 826.73 | 1516.24 | 1639.89 | 1697.07 |
| | 50-59 | 388.20 | 725.05 | 669.27 | 751.70 |
| | 60-69 | 123.61 | 221.76 | 285.73 | 239.23 |
| | > 69 | 18.44 | 49.49 | 82.80 | 35.07 |
| Water, Fuel, and Electricity | < 30 | 397.90 | 601.50 | 542.20 | 691.25 |
| | 30-39 | 680.31 | 991.45 | 1004.33 | 1119.03 |
| | 40-49 | 782.55 | 1194.46 | 1218.36 | 1349.74 |
| | 50-59 | 725.93 | 1136.71 | 1188.78 | 1318.55 |
| | 60-69 | 627.34 | 991.88 | 996.00 | 1145.43 |
| | > 69 | 547.35 | 760.85 | 776.96 | 854.72 |
| Water | < 30 | 30.97 | 42.61 | 41.41 | 57.91 |
| | 30-39 | 52.87 | 68.62 | 89.54 | 98.06 |
| | 40-49 | 61.84 | 82.78 | 109.74 | 117.54 |
| | 50-59 | 54.97 | 77.56 | 100.59 | 106.02 |
| | 60-69 | 49.80 | 69.90 | 79.99 | 87.86 |
| | > 69 | 41.87 | 51.22 | 57.81 | 69.12 |

**Table 2-1** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Fuel Oil and Other Liquid Fuel | < 30 | 79.32 | 97.34 | 61.14 | 80.30 |
| | 30-39 | 157.59 | 167.29 | 117.49 | 131.68 |
| | 40-49 | 211.28 | 267.68 | 214.73 | 164.25 |
| | 50-59 | 216.63 | 276.95 | 253.79 | 197.58 |
| | 60-69 | 199.27 | 287.06 | 213.94 | 198.69 |
| | > 69 | 177.45 | 238.50 | 196.42 | 198.53 |
| Piped Gas | < 30 | 61.72 | 123.35 | 137.90 | 139.90 |
| | 30-39 | 109.05 | 214.38 | 279.38 | 236.37 |
| | 40-49 | 131.04 | 235.75 | 310.55 | 279.00 |
| | 50-59 | 108.47 | 241.66 | 290.81 | 299.88 |
| | 60-69 | 99.54 | 191.28 | 264.19 | 219.58 |
| | > 69 | 93.45 | 133.49 | 186.70 | 168.57 |
| Other Fuels | < 30 | 11.28 | 22.16 | 8.50 | 21.54 |
| | 30-39 | 24.65 | 43.63 | 24.24 | 44.92 |
| | 40-49 | 23.53 | 47.97 | 25.65 | 53.66 |
| | 50-59 | 25.20 | 43.76 | 26.62 | 48.80 |
| | 60-69 | 23.08 | 34.33 | 13.73 | 52.00 |
| | > 69 | 22.13 | 22.75 | 15.38 | 28.86 |
| Electricity | < 30 | 214.61 | 316.04 | 239.24 | 391.60 |
| | 30-39 | 336.14 | 497.53 | 493.67 | 607.99 |
| | 40-49 | 354.87 | 560.29 | 556.78 | 735.29 |
| | 50-59 | 320.65 | 496.79 | 516.97 | 666.27 |
| | 60-69 | 255.64 | 409.30 | 424.15 | 587.30 |
| | > 69 | 212.46 | 314.87 | 320.64 | 389.66 |
| Other Accommodation | < 30 | 94.26 | 148.94 | 172.12 | 169.80 |
| | 30-39 | 158.67 | 242.53 | 267.92 | 273.89 |
| | 40-49 | 238.13 | 428.24 | 446.02 | 569.23 |
| | 50-59 | 230.75 | 402.64 | 448.71 | 559.89 |
| | 60-69 | 156.36 | 235.60 | 333.00 | 385.79 |
| | > 69 | 60.03 | 139.47 | 157.12 | 164.50 |
| Traveller Accommodation | < 30 | .. | 117.21 | 112.12 | 126.22 |
| | 30-39 | .. | 184.47 | 170.87 | 181.83 |
| | 40-49 | .. | 214.80 | 227.05 | 237.55 |
| | 50-59 | .. | 189.87 | 201.89 | 239.72 |
| | 60-69 | .. | 117.76 | 203.63 | 179.04 |
| | > 69 | .. | 74.95 | 91.18 | 79.48 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

TABLE 2-2

PROPORTION OF INCOME BEFORE TAXES SPENT ON HOUSING AND HOUSING RELATED ITEMS BY AGE

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | < 30 | .213 | .211 | .239 | .261 |
| | 30-39 | .191 | .198 | .257 | .275 |
| | 40-49 | .164 | .176 | .186 | .179 |
| | 50-59 | .166 | .172 | .241 | .218 |
| | 60-69 | .209 | .210 | .221 | .225 |
| | > 69 | .257 | .266 | .275 | .267 |
| Principal Accommodation | < 30 | .. | .205 | .233 | .255 |
| | 30-39 | .. | .191 | .250 | .269 |
| | 40-49 | .. | .166 | .178 | .170 |
| | 50-59 | .. | .161 | .232 | .207 |
| | 60-69 | .. | .202 | .210 | .212 |
| | > 69 | .. | .258 | .269 | .259 |
| Rented Living Quarters | < 30 | .130 | .132 | .177 | .184 |
| | 30-39 | .054 | .063 | .132 | .144 |
| | 40-49 | .042 | .044 | 069 | .056 |
| | 50-59 | .047 | .048 | .118 | .057 |
| | 60-69 | .065 | .067 | .602 | .081 |
| | > 69 | .094 | .117 | .142 | .136 |
| Rent | < 30 | .. | .129 | .174 | .182 |
| | 30-39 | .. | .061 | .130 | .138 |
| | 40-49 | .. | .042 | .067 | .055 |
| | 50-59 | .. | .046 | .113 | .056 |
| | 60-69 | .. | .063 | .098 | .083 |
| | > 69 | .. | .113 | .138 | .132 |
| Owned Living Quarters | < 30 | .051 | .046 | .035 | .044 |
| | 30-39 | .097 | .093 | .088 | .083 |
| | 40-49 | .074 | .084 | .077 | .078 |
| | 50-59 | .066 | .069 | .067 | .103 |
| | 60-69 | .073 | .073 | .065 | .072 |
| | > 69 | .075 | .071 | .071 | .064 |
| Maintenance, Repairs and Replacements | < 30 | .008 | .004 | .011 | .004 |
| | 30-39 | .015 | .008 | .012 | .009 |
| | 40-49 | .015 | .012 | .010 | .010 |
| | 50-59 | .019 | .013 | .011 | .026 |
| | 60-69 | .025 | .016 | .010 | .016 |
| | > 69 | .029 | .021 | .018 | .017 |

**Table 2-2** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Contract and Labour Costs | < 30 | .. | .. | .007 | .002 |
| | 30-39 | .. | .. | .010 | .005 |
| | 40-49 | .. | .. | .008 | .006 |
| | 50-59 | .. | .. | .007 | .022 |
| | 60-69 | .. | .. | .007 | .012 |
| | > 69 | .. | .. | .016 | .014 |
| Materials | < 30 | .. | .. | .009 | .002 |
| | 30-39 | .. | .. | .010 | .004 |
| | 40-49 | .. | .. | .011 | .005 |
| | 50-59 | .. | .. | .009 | .004 |
| | 60-69 | .. | .. | .010 | .004 |
| | > 69 | .. | .. | .003 | .003 |
| Property Taxes | < 30 | .007 | .006 | .006 | .007 |
| | 30-39 | .017 | .016 | .004 | .016 |
| | 40-49 | .019 | .021 | .004 | .019 |
| | 50-59 | .023 | .024 | .004 | .027 |
| | 60-69 | .030 | .031 | .004 | .031 |
| | > 69 | .035 | .035 | .034 | .031 |
| Homeowner's Insurance Premiums | < 30 | .002 | .002 | .005 | .002 |
| | 30-39 | .003 | .005 | .005 | .004 |
| | 40-49 | .004 | .006 | .004 | .005 |
| | 50-59 | .005 | .007 | .005 | .008 |
| | 60-69 | .006 | .009 | .005 | .009 |
| | > 69 | .007 | .009 | .009 | .008 |
| Mortgage Interest | < 30 | .032 | .030 | .027 | .023 |
| | 30-39 | .057 | .058 | .019 | .045 |
| | 40-49 | .032 | .040 | .026 | .036 |
| | 50-59 | .017 | .021 | .033 | .035 |
| | 60-69 | .007 | .010 | .036 | .074 |
| | > 69 | .002 | .003 | .005 | .002 |
| Water, Fuel, and Electricity | < 30 | .025 | .027 | .022 | .027 |
| | 30-39 | .033 | .035 | .030 | .042 |
| | 40-49 | .039 | .038 | .032 | .036 |
| | 50-59 | .044 | .045 | .048 | .047 |
| | 60-69 | .062 | .063 | .044 | .055 |
| | > 69 | .088 | .070 | .056 | .060 |
| Water | < 30 | .002 | .002 | .002 | .002 |
| | 30-39 | .003 | .002 | .003 | .004 |
| | 40-49 | .003 | .003 | .003 | .003 |
| | 50-59 | .003 | .003 | .004 | .003 |
| | 60-69 | .005 | .004 | .003 | .004 |
| | > 69 | .006 | .005 | .004 | .005 |

**Table 2-2** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Fuel Oil and Other Liquid Fuel | < 30 | .005 | .004 | .002 | .003 |
| | 30-39 | .008 | .006 | .003 | .004 |
| | 40-49 | .011 | .009 | .005 | .004 |
| | 50-59 | .014 | .012 | .008 | .009 |
| | 60-69 | .019 | .019 | .009 | .010 |
| | > 69 | .026 | .022 | .014 | .014 |
| Piped Gas | < 30 | .003 | .005 | .005 | .006 |
| | 30-39 | .005 | .007 | .008 | .006 |
| | 40-49 | .006 | .007 | .008 | .007 |
| | 50-59 | .006 | .008 | .010 | .009 |
| | 60-69 | .010 | .012 | .011 | .009 |
| | > 69 | .015 | .013 | .014 | .012 |
| Other Fuels | < 30 | .001 | .001 | .000 | .001 |
| | 30-39 | .001 | .002 | .001 | .001 |
| | 40-49 | .001 | .002 | .001 | .002 |
| | 50-59 | .002 | .002 | .001 | .002 |
| | 60-69 | .002 | .003 | .001 | .003 |
| | > 69 | .004 | .002 | .001 | .002 |
| Electricity | < 30 | .014 | .015 | .013 | .016 |
| | 30-39 | .017 | .018 | .016 | .027 |
| | 40-49 | .017 | .018 | .016 | .020 |
| | 50-59 | .019 | .020 | .025 | .024 |
| | 60-69 | .025 | .026 | .020 | .029 |
| | > 69 | .031 | .029 | .023 | .027 |
| Other Accommodation | < 30 | .. | .006 | .006 | .005 |
| | 30-39 | .. | .007 | .007 | .006 |
| | 40-49 | .. | .010 | .008 | .010 |
| | 50-59 | .. | .010 | .009 | .011 |
| | 60-69 | .. | .008 | .011 | .012 |
| | > 69 | .. | .007 | .007 | .008 |
| Traveller Accommodation | < 30 | .. | .004 | .004 | .004 |
| | 30-39 | .. | .005 | .004 | .004 |
| | 40-49 | .. | .005 | .005 | .004 |
| | 50-59 | .. | .005 | .004 | .005 |
| | 60-69 | .. | .004 | .007 | .006 |
| | > 69 | .. | .004 | .004 | .004 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

TABLE 2-3

PROPORTION OF TOTAL EXPENDITURE SPENT ON HOUSING AND HOUSING RELATED ITEMS BY AGE

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | < 30 | .183 | .249 | .262 | .248 |
| | 30-39 | .183 | .254 | .265 | .244 |
| | 40-49 | .157 | .224 | .238 | .220 |
| | 50-59 | .155 | .221 | .234 | .218 |
| | 60-69 | .199 | .257 | .262 | .247 |
| | > 69 | .266 | .324 | .344 | .316 |
| Principal Accommodation | < 30 | .. | .242 | .254 | .241 |
| | 30-39 | .. | .245 | .257 | .236 |
| | 40-49 | .. | .210 | .286 | .206 |
| | 50-59 | .. | .206 | .220 | .202 |
| | 60-69 | .. | .246 | .248 | .231 |
| | > 69 | .. | .314 | .335 | .308 |
| Rented Living Quarters | < 30 | .106 | .147 | .184 | .157 |
| | 30-39 | .050 | .073 | .101 | .090 |
| | 40-49 | .037 | .049 | .076 | .060 |
| | 50-59 | .042 | .055 | .085 | .061 |
| | 60-69 | .062 | .076 | .105 | .086 |
| | > 69 | .093 | .135 | .175 | .160 |
| Rent | < 30 | .. | .144 | .180 | .154 |
| | 30-39 | .. | .071 | .098 | .088 |
| | 40-49 | .. | .048 | .074 | .058 |
| | 50-59 | .. | .053 | .083 | .060 |
| | 60-69 | .. | .073 | .101 | .084 |
| | > 69 | .. | .131 | .171 | .154 |
| Owned Living Quarters | < 30 | .049 | .128 | .045 | .054 |
| | 30-39 | .095 | .061 | .117 | .105 |
| | 40-49 | .073 | .042 | .107 | .101 |
| | 50-59 | .062 | .046 | .083 | .086 |
| | 60-69 | .068 | .063 | .086 | .082 |
| | > 69 | .078 | .113 | .088 | .076 |
| Maintenance, Repairs and Replacements | < 30 | .007 | .005 | .005 | .005 |
| | 30-39 | .014 | .011 | .012 | .011 |
| | 40-49 | .014 | .015 | .014 | .013 |
| | 50-59 | .017 | .017 | .016 | .016 |
| | 60-69 | .022 | .020 | .021 | .018 |
| | > 69 | .027 | .025 | .021 | .019 |

**Table 2-3** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Contract and Labour Costs | < 30 | .. | .. | .002 | .002 |
| | 30-39 | .. | .. | .008 | .006 |
| | 40-49 | .. | .. | .008 | .007 |
| | 50-59 | .. | .. | .012 | .011 |
| | 60-69 | .. | .. | .017 | .014 |
| | > 69 | .. | .. | .018 | .016 |
| Materials | < 30 | .. | .. | .002 | .003 |
| | 30-39 | .. | .. | .005 | .005 |
| | 40-49 | .. | .. | .005 | .006 |
| | 50-59 | .. | .. | .004 | .005 |
| | 60-69 | .. | .. | .004 | .005 |
| | > 69 | .. | .. | .003 | .003 |
| Property Taxes | < 30 | .007 | .009 | .007 | .009 |
| | 30-39 | .017 | .023 | .023 | .021 |
| | 40-49 | .020 | .029 | .028 | .026 |
| | 50-59 | .022 | .033 | .033 | .031 |
| | 60-69 | .030 | .041 | .037 | .038 |
| | > 69 | .038 | .047 | .044 | .039 |
| Homeowner's Insurance Premiums | < 30 | .002 | .003 | .002 | .003 |
| | 30-39 | .003 | .007 | .006 | .006 |
| | 40-49 | .004 | .008 | .007 | .007 |
| | 50-59 | .004 | .009 | .008 | .009 |
| | 60-69 | .006 | .011 | .009 | .010 |
| | > 69 | .008 | .012 | .012 | .010 |
| Mortgage Interest | < 30 | .031 | .040 | .028 | .030 |
| | 30-39 | .055 | .078 | .067 | .058 |
| | 40-49 | .032 | .053 | .052 | .048 |
| | 50-59 | .017 | .029 | .021 | .025 |
| | 60-69 | .007 | .012 | .013 | .008 |
| | > 69 | .002 | .003 | .005 | .002 |
| Water, Fuel, and Electricity | < 30 | .023 | .032 | .025 | .030 |
| | 30-39 | .032 | .046 | .039 | .041 |
| | 40-49 | .038 | .050 | .043 | .045 |
| | 50-59 | .042 | .058 | .052 | .054 |
| | 60-69 | .061 | .078 | .057 | .063 |
| | > 69 | .090 | .089 | .072 | .075 |
| Water | < 30 | .002 | .002 | .002 | .002 |
| | 30-39 | .003 | .003 | .003 | .003 |
| | 40-49 | .003 | .003 | .004 | .004 |
| | 50-59 | .003 | .004 | .004 | .004 |
| | 60-69 | .005 | .005 | .004 | .005 |
| | > 69 | .007 | .006 | .006 | .006 |

**Table 2-3** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Fuel Oil and Other Liquid Fuel | < 30 | .005 | .005 | .003 | .004 |
| | 30-39 | .008 | .008 | .004 | .005 |
| | 40-49 | .011 | .012 | .007 | .005 |
| | 50-59 | .013 | .014 | .011 | .010 |
| | 60-69 | .019 | .023 | .012 | .012 |
| | > 69 | .028 | .028 | .018 | .017 |
| Piped Gas | < 30 | .003 | .006 | .006 | .006 |
| | 30-39 | .005 | .009 | .010 | .008 |
| | 40-49 | .006 | .009 | .010 | .009 |
| | 50-59 | .006 | .011 | .012 | .011 |
| | 60-69 | .010 | .015 | .014 | .011 |
| | > 69 | .016 | .016 | .019 | .015 |
| Other Fuels | <.30 | .001 | .001 | .000 | .001 |
| | 30-39 | .001 | .002 | .001 | .002 |
| | 40-49 | .001 | .002 | .001 | .002 |
| | 50-59 | .002 | .002 | .001 | .002 |
| | 60-69 | .003 | .003 | .001 | .003 |
| | > 69 | .005 | .003 | .001 | .003 |
| Electricity | < 30 | .013 | .018 | .015 | .018 |
| | 30-39 | .016 | .023 | .020 | .023 |
| | 40-49 | .017 | .024 | .021 | .025 |
| | 50-59 | .019 | .026 | .023 | .027 |
| | 60-69 | .024 | .032 | .026 | .033 |
| | > 69 | .034 | .036 | .029 | .034 |
| Other Accommodation | < 30 | .. | .007 | .008 | .007 |
| | 30-39 | .. | .009 | .009 | .008 |
| | 40-49 | .. | .014 | .012 | .014 |
| | 50-59 | .. | .015 | .014 | .016 |
| | 60-69 | .. | .011 | .014 | .016 |
| | > 69 | .. | .010 | .009 | .007 |
| Traveller Accommodation | < 30 | .. | .006 | .005 | .004 |
| | 30-39 | .. | .007 | .006 | .006 |
| | 40-49 | .. | .007 | .007 | .006 |
| | 50-59 | .. | .007 | .007 | .006 |
| | 60-69 | .. | .006 | .009 | .008 |
| | > 69 | .. | .006 | .005 | .003 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

the year or where the unit owned a vacation property and rented its principal accommodation.

The dominant factor in causing higher expenditures for those in the 30-39 (or 40-49 in 1986) age group would appear to be the costs of owned living quarters (includes expenditures on maintenance, condominium charges, property taxes, homeowners insurance premiums, and mortgage interest) for which mortgage interest makes up a significant portion. In all years, the same pattern is evident.

Since definitions are essential to understanding the following discussion, it is important that they be given some attention. Principal accommodation refers to all expenditures made by the SU on rented living quarters and owned living quarters as well as expenditures on water, fuel, and electricity. Rented Living Quarters refers to expenditures on Rent, Tenants' Maintenance, Repairs, and Alterations, as well as Tenants' Insurance Premiums.

Expenditures on Owned Living Quarters refers to the aggregate of expenditures on Maintenance, Repairs, and Replacements, Condominium Charges, Property Taxes, Homeowners' Insurance Premiums, Mortgage Interest, and Other Expenditures. Maintenance, Repairs, and Replacements includes both the Contract and Labour Costs as well as Materials and refers to expenditures on Outdoor Patios, Fences, and Driveways, Exterior Walls, Painting (exterior or interior), Wall Papering, Other Interior Walls and Ceilings, Carpentry (including Wooden Flooring), Electrical Systems, Mechanical Systems, Complete Re-Roofing, Eavestroughing and Other Roof Repairs, Hard Surface Flooring and Carpeting, Other Replacements and Repairs.

Mortgage Interest and Property Taxes are straightforward in their interpretation. Water, Fuel, and Electricity includes expenditures for the main residence on Water, Fuel, Oil, and Other Liquid Fuel, Piped Gas, Other Fuels, and Electricity.

In these instances, renters are only included if they paid these expenditures separately.

Other Accommodation includes expenditures on Owned Vacation Homes, Traveller Accommodation, Rented Vacation Homes, and Other Accommodation Away from Home. Traveller Accommodation includes expenditures on Hotels, Motels, and Other Traveller Accommodation.

Taking the absolute expenditures reported in Table 2-1 and dividing those dollar figures by before-tax income gives some insight into the ability of a household to pay for shelter. Typically, the banks and CMHC have been known to refer to the thirty percent guideline (i.e. a household's expenditures on housing should not exceed 30 per cent of before-tax income). These data are reported in Table 2-2 where it is noted that housing expenditures do not exceed 30 per cent on average for any age group in any year.

The literature on income-related expenditures suggests that total spending is a proxy for permanent income which refers to an individual family's expectations of income over the long term and is really a better measure of capacity to spend since it will tend to smooth the income function somewhat (before-tax income may be subject to fluctuations during periods of unemployment or during those years when the person is a hockey star or book author). [For a discussion of this see W.L. Marr and D.J. McCready 1989a p. 24. Also, refer to Ketkar and Cho 1982; Ketkar and Ketkar

1987] Expenditures on shelter as a proportion of total spending were higher than the 30 per cent level for those families headed by someone over the age of 70. Interestingly, other work done by the authors has suggested that it is this group which also saves the most [Marr and McCready 1989b]. Savings would be deducted from before-tax income in order to calculate total expenditures. Institutional care costs are not included in this household expenditure survey as those in jails, hospitals, and senior citizen's homes were not surveyed. Since institutional care refers to meals, accommodations, and some health or social services it would be difficult to separate out and include only those expenditures on shelter.

In Tables 2-2 and 2-3, it is evident that spending on shelter follows a U shape as the household head ages. Here, rented living quarters follow that pattern while owned living quarters do not, to the same extent. Probably the largest single reason is the low incomes of those under 29 and over 70 relative to the other age groups and the importance of rent for the younger and older SUs, for as we saw in Table 2-1, rents were smaller in total than expenditures on owned living quarters.

It is also of interest that the two youngest age groups in Table 2-2 experience rising shelter costs as a proportion of income before taxes from 1978 to 1986, and especially for the last two years shown. For example, households with heads aged 30 to 39 allocate 19.1% of income to shelter in 1978; this rises to 25.7% in 1984 and to 27.5% in 1986. Shelter costs are rising faster than income before taxes. This reflects the financial struggle that many relatively young households have in acquiring accommodation. The shelter proportion is mirrored in the proportion allocated to rental living quarters but not to owned living quarters.

This shift across the four years is not evident in Table 2-3. With a few exceptions, the proportion of total expenditure on goods and services allocated to shelter is quite constant from 1982 to 1984 to 1986 for all age groups. However, the proportions for 1978 are quite low compared to the other three years. It is beyond the scope of this study to examine the structural changes in the economy that may have caused this leap upwards in the proportion, but this may reflect the rising absolute cost of accommodation, the recession of the early 1980s, as well as fundamental changes in factors that underly consumption habits.

When considering expenditures on owned living quarters, mortgage interest drops to virtually nothing for households over the age of 70, but it is clearly significant for the younger and middle-aged households. On the other hand, seniors bear a larger burden of the property tax as a proportion of total consumption or as a proportion of before-tax income.

What is particularly interesting is to control for a number of other variables to see if age still remains a significant influence. That is done in Tables 2-4 (age controlled for income quintile), Table 2-5 (age controlled for region of the country), and Table 2-6 (age controlled for size of municipality in which the SU is located). A discussion of each of these controls appears later in the study. The reader is referred to the later discussion for the value of the quintiles for instance. Only expenditures on total shelter expenditure are included as otherwise the examination would be too unwieldy and not feasible. The remaining variables (rented living quarters, owned living quarters, mortgage interest, property taxes, fuel, water, and traveller's accommodation, for instance) are available upon request from the authors.

## TABLE 2-4

### EXPENDITURES ON SHELTER AS A PERCENTAGE OF TOTAL SPENDING BROKEN DOWN BY AGE AND INCOME

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| AGE UNDER 30 | | | | |
| Lowest Quintile | .235 | .260 | .325 | .275 |
| Second Quintile | .184 | .200 | .206 | .194 |
| Third Quintile | .168 | .181 | .186 | .172 |
| Fourth Quintile | .169 | .175 | .170 | .165 |
| Highest Quintile | .145 | .170 | .154 | .153 |
| AGE 30-39 | | | | |
| Lowest Quintile | .250 | .270 | .324 | .306 |
| Second Quintile | .193 | .211 | .226 | .202 |
| Third Quintile | .187 | .192 | .195 | .182 |
| Fourth Quintile | .172 | .180 | .185 | .180 |
| Highest Quintile | .158 | .171 | .161 | .144 |
| AGE 40-49 | | | | |
| Lowest Quintile | .252 | .296 | .328 | .298 |
| Second Quintile | .173 | .201 | .212 | .202 |
| Third Quintile | .166 | .168 | .194 | .169 |
| Fourth Quintile | .138 | .160 | .163 | .143 |
| Highest Quintile | .127 | .137 | .133 | .128 |
| AGE 50-59 | | | | |
| Lowest Quintile | .253 | .275 | .332 | .297 |
| Second Quintile | .167 | .186 | .212 | .196 |
| Third Quintile | .146 | .170 | .171 | .146 |
| Fourth Quintile | .128 | .137 | .137 | .131 |
| Highest Quintile | .110 | .123 | .120 | .108 |
| AGE 60-69 | | | | |
| Lowest Quintile | .254 | .286 | .312 | .283 |
| Second Quintile | .187 | .204 | .219 | .201 |
| Third Quintile | .153 | .170 | .182 | .155 |
| Fourth Quintile | .128 | .143 | .135 | .125 |
| Highest Quintile | .119 | .123 | .122 | .115 |
| AGE 70 AND OVER | | | | |
| Lowest Quintile | .292 | .323 | .355 | .312 |
| Second Quintile | .192 | .239 | .269 | .228 |
| Third Quintile | .165 | .182 | .207 | .172 |
| Fourth Quintile | .169 | .188 | .190 | .149 |
| Highest Quintile | .135 | .128 | .137 | .114 |

Recall from Table 2-3 that the relationship for all four years between age of household's head and the proportion of total expenditure allocated to shelter is U-shaped: relatively high for heads aged less than 30 or 30 to 39, relatively low for heads aged 40 to 49 or 50 to 59, and relatively high for heads of older ages. Does this pattern change when income is held constant in Table 2-4? The answer is: Yes! If income is held constant by comparing heads under age 30 with heads 30 to 39 years in the same income quintile, most proportions are now lower for households with heads under the age of 30. The higher proportions shown in Table 2-3 are caused by the relatively low incomes of heads in this age group. If we hold age constant in Table 2-4 and move through the income quintiles from the lowest to the highest, the proportion of total spending allocated to shelter falls significantly. (This will be shown again in Chapter 4 using a measure of long-term or permanent income and controlling for other factors that affect this proportion). Therefore, those in the youngest age group allocate higher proportions of total spending to shelter in part because they have lower incomes, not because they are younger; in fact, if income quintile is held constant, these households allocate less to shelter.

With the possible exception of the lowest quintile, comparing ages 40 to 49 or 50 to 59 with ages 30 to 39 for the same income quintile yields the same result as in Table 2-3: generally lower proportions of total spending allocated to shelter for the two older age groups. In Table 2-3, this proportion rises sharply for households with heads aged 60 to 69 in all four years. Again comparing this age group with groups 50 to 59 (or 40 to 49) for the same income quintile does not yield such a sharp break; in many cases households with heads aged 60 to 69 allocate about the same pro-

portion of total spending to shelter as households with heads in the younger age groups. This attests to the impact that income has on this proportion, and to the fact that this proportion falls as income rises; the sharp increases in Table 2-3 are caused by the lower incomes for heads aged 60 to 69 compared to younger households rather than by the fact that the households are older.

Table 2-4 confirms the rise in the proportion of total spending allocated to shelter for households with heads aged 69 or over. For the same income quintile, this age group allocates a higher proportion than any other age group in the table. An exception is the highest income quintile; if the data for this quintile are followed through the age groups, the proportion of total spending allocated to shelter for the oldest age group is at the same level or even below some proportions for some younger age groups. Finally, the sharpest increase is for households in the lowest income quintile over households with heads aged 60 to 69. However, it should be noted that the proportions, while relatively high, are also at similar levels for the lowest quintile in other age groups. The proportions in excess of 30% in Table 2-3 for the oldest age group is a low income phenomenon, and is not general for this group; also the lowest income quintile has proportions in excess of 30% in other age groups, which is not evident from Table 2-3. Therefore, both age and income influence the proportion of total spending allocated to shelter.

In Table 2-4, it is noted that as income decreases, the proportion of total spending allocated to shelter rises. In fact, as noted before, the only aggregate spending on shelter that exceeds thirty percent of total spending occurs amongst the lowest quintile of income earners. In 1984,

TABLE 2-5

PROPORTION OF TOTAL EXPENDITURE SPENT ON SHELTER
BY AGE BY REGION

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| AGE UNDER 30 | | | | |
| Atlantic | .172 | .174 | .208 | .184 |
| Quebec | .168 | .189 | .200 | .193 |
| Ontario | .196 | .198 | .200 | .205 |
| Manitoba & Sask.) | | | | .194 |
| ) | .186 | .209 | .215 | |
| Alberta ) | | | | .205 |
| B.C. | .185 | .234 | .265 | .204 |
| AGE 30-39 | | | | |
| Atlantic | .157 | .162 | .191 | .157 |
| Quebec | .168 | .185 | .196 | .180 |
| Ontario | .199 | .203 | .192 | .204 |
| Manitoba & Sask.) | | | | .186 |
| ) | .182 | .199 | .214 | |
| Alberta ) | | | | .193 |
| B.C. | .196 | .221 | .235 | .217 |
| AGE 40-49 | | | | |
| Atlantic | .137 | .159 | .161 | .146 |
| Quebec | .155 | .171 | .173 | .170 |
| Ontario | .163 | .172 | .170 | .162 |
| Manitoba & Sask.) | | | | .149 |
| ) | .151 | .181 | .185 | |
| Alberta ) | | | | .191 |
| B.C. | .161 | .185 | .212 | .186 |
| AGE 50-59 | | | | |
| Atlantic | .162 | .156 | .173 | .155 |
| Quebec | .150 | .179 | .201 | .173 |
| Ontario | .157 | .168 | .167 | .167 |
| Manitoba & Sask.) | | | | .156 |
| ) | .143 | .168 | .176 | |
| Alberta ) | | | | .171 |
| B.C. | .167 | .180 | .169 | .181 |
| AGE 60-69 | | | | |
| Atlantic | .193 | .207 | .212 | .201 |
| Quebec | .194 | .224 | .223 | .218 |
| Ontario | .207 | .212 | .206 | .216 |
| Manitoba & Sask.) | | | | .205 |
| ) | .188 | .199 | .202 | |
| Alberta ) | | | | .181 |
| B.C. | .210 | .230 | .243 | .186 |
| AGE 70 AND OVER | | | | |
| Atlantic | .241 | .271 | .288 | .237 |
| Quebec | .264 | .290 | .339 | .297 |
| Ontario | .294 | .292 | .295 | .281 |
| Manitoba & Sask.) | | | | .268 |
| ) | .237 | .268 | .292 | |
| Alberta ) | | | | .234 |
| B.C. | .258 | .290 | .273 | .259 |

that was true for all age groups while for other years that was only true for those over the age of seventy. It will also be noted that in 1984 the numbers were highest reflecting rising housing prices accompanied by very high interest rates on mortgages in the early eighties.

From Table 2-5, it is possible to hold the region of residence constant and look at the proportion of total spending allocated to shelter by age group. The U-shaped pattern noted first in Table 2-3 still holds for the Atlantic region, Quebec, and the Prairies, but for Ontario and British Columbia the youngest age group in some years has lower proportions of total spending allocated to shelter than households in the age group 30 to 39. The latter two provinces have relatively high incomes at the lower end of the income spectrum, which may lead to a partial offset of the more general case of higher proportions for the lowest age group. But in general, controlling for region of residence leaves the U-shaped pattern by age group substantially intact, especially when compared with the substantial changes when income quintile is controlled.

Table 2-5 also allows a comparison across regions for each age group. It will be noted that after 1978, British Columbia became a more expensive place to live as housing expenditures as a proportion of total spending increased. By 1986, however, other regions, Alberta, Ontario, and Quebec, had caught up for most age groups. Another noticeable fact is that the over-69 age group experienced relatively high expenses on housing as a proportion of total spending including, in the province of Quebec, in 1984, the only case of spending more than thirty percent of total expenditures on shelter. Also, in all years, for the over-69 age group, it was more expensive to live in Ontario than British Columbia when considered as a percent-

## TABLE 2-6

### PROPORTION OF TOTAL EXPENDITURE SPENT ON SHELTER BY AGE BY MUNICIPAL SIZE

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| AGE UNDER 30 | | | | |
| Urban > 100000 | .192 | .212 | .213 | .203 |
| Urban 30000-99999 | .186 | .209 | .. | .213 |
| Urban < 30000 | .162 | .181 | .. | .192 |
| Rural Farm | .172 | .175 | .. | .180 |
| Rural Non-Farm | | | | .178 |
| AGE 30-39 | | | | |
| Urban > 100000 | .193 | .204 | .203 | .204 |
| Urban 30000-99999 | .176 | .199 | .. | .192 |
| Urban < 30000 | .175 | .201 | .. | .173 |
| Rural Farm | .158 | .169 | .. | .154 |
| Rural Non-Farm | | | | .158 |
| AGE 40-49 | | | | |
| Urban > 100000 | .163 | .180 | .180 | .175 |
| Urban 30000-99999 | .167 | .181 | .. | .172 |
| Urban < 30000 | .142 | .172 | .. | .169 |
| Rural Farm | .147 | .153 | .. | .123 |
| Rural Non-Farm | | | | .142 |
| AGE 50-59 | | | | |
| Urban > 100000 | .161 | .173 | .180 | .168 |
| Urban 30000-99999 | .148 | .180 | .. | .172 |
| Urban < 30000 | .154 | .173 | .. | .180 |
| Rural Farm | .139 | .163 | .. | .135 |
| Rural Non-Farm | | | | .170 |
| AGE 60-69 | | | | |
| Urban > 100000 | .214 | .221 | .216 | .219 |
| Urban 30000-99999 | .199 | .224 | .. | .244 |
| Urban < 30000 | .196 | .23 | .. | .195 |
| Rural Farm | .167 | .185 | .. | .145 |
| Rural Non-Farm | | | | .176 |
| AGE 70 AND OVER | | | | |
| Urban > 100000 | .291 | .299 | .301 | .296 |
| Urban 30000-99999 | .273 | .295 | .. | .279 |
| Urban < 30000 | .250 | .285 | .. | .259 |
| Rural Farm | .217 | .238 | .. | .203 |
| Rural Non-Farm | | | | .199 |

age of total expenditures. In general, one region is not consistently a higher allocation region than others across age groups or years. However, Ontario does not seem to exhibit the general pattern of higher proportions in the 1980s as compared to 1978 that are evident for the other regions.

The general U-shaped pattern for differences across age groups in Table 2-3 is more or less evident for urban centres with populations in excess of 100,000 in Table 2-6. This is also true for all smaller urban areas and for rural areas. The youngest and oldest households have relatively high proportions of total spending allocated to shelter.

Housing costs also vary according to the size of community one lives in. This is reflected in Table 2-6. It will be noted in this table that for most age groups, living in an urban centre of greater than 100,000 population leads to allocating more of total spending to shelter although in a few instances, it becomes evident that to live in a community of 30,000 to 99,999 requires a greater percentage of total expenditures (i.e. under age 29 in 1986). Since the 1984 survey is for communities of over 100,000 1984 entries for smaller centres are blank in Table 2-6.

**FAMILY COMPOSITION:**

At this point, attention turns to family composition as an important demographic variable. Tables 2-7, 2-8, and 2-9 set out the expenditures both in absolute levels and as a proportion of both before-tax income and total consumption for 1982, 1984, and 1986. Unfortunately, the 1978 data set only has whether the family was a married couple unit or not. Again, we want to emphasize those expenditures which are largest, i.e. those on shelter, rented living quarters, owned living quarters, utilities, property tax, and mortgage interest.

It will be noted that Tables 2-8 and 2-9 establish that shelter expenditures are highest in proportion to total spending or before-tax income in aggregate for those who are unattached or who head single-parent families. For both groups, it is rented living quarters which constitute most of the spending, for when we look at property taxes, owned living quarters or mortgage interest, these groups devote a low proportion of either total spending or before-tax income to these items. Yet, as was observed in Table 2-1, rented living quarters was considerably smaller as an absolute dollar figure than owned living quarters. What this suggests is that unattached individuals and single-parent families are the "poor" in that their incomes before-tax and total expenditures are considerably lower than other groups so that their rental expenditures (this group does not normally have cash with which to purchase a house, unless they are elderly and bought the house in younger days) constitute a large portion of their total spending or their income before-taxes.

Both Tables 2-8 and 2-9 show an interesting pattern for married couples with and without children. When a couple has young children in the household, the proportion of spending or income allocated to shelter rises noticeably, which probably reflects moving into a house with its mortgage payments, property taxes, maintenance, etc. But as the youngest child ages, both proportions decline until, when the youngest child is 16 years old or older, both proportions are well below even the married only allocation. In fact, married couples with their youngest child 16 years old or older have by far the lowest proportion of total spending of income allocated to shelter.

Because the tables in this chapter for the most part relate single demographic characteristics to spending on housing and housing related

TABLE 2-7

MEAN ABSOLUTE HOUSING EXPENDITURES
BY FAMILY COMPOSITION

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | Unattached Individuals | .. | 3312.59 | 3910.83 | 3992.10 |
| | Married Only | .. | 4392.96 | 5517.55 | 5326.73 |
| | Married Family: youngest child < 5 yrs. | .. | 5624.85 | 7276.08 | |
| | Married Family: youngest 5-15 yrs. | .. | 5783.58 | 6856.46 | 6805.11 |
| | Married Family: youngest ≥ 16 yrs. | .. | 5048.70 | 5926.23 | |
| | Married Couple: with other relative only | .. | 5657.27 | 6423.06 | 6981.08 |
| | Married Couple: with unrelated persons | .. | 6685.90 | 6437.83 | 6639.15 |
| | Single Parent Family Only | .. | 4032.60 | 5141.01 | 5145.53 |
| | Other Spending Unit: with relative only | .. | 4270.62 | 5262.21 | 5140.25 |
| | Other Spending Unit: with unrelated persons | .. | 5386.43 | 6389.68 | 6728.65 |
| Rented Living Quarters | Unattached Individuals | .. | 1914.57 | 2663.18 | 2438.03 |
| | Married Only | .. | 1185.57 | 1884.99 | 1503.55 |
| | Married Family: youngest child < 5 yrs. | .. | 1110.29 | 1822.87 | |
| | Married Family: youngest 5-15 yrs. | .. | 704.74 | 1107.00 | 1039.74 |
| | Married Family: youngest ≥ 16 yrs. | .. | 511.50 | 790.09 | |
| | Married Couple: with other relative only | .. | 1038.93 | 937.83 | 1553.18 |
| | Married Couple: with unrelated persons | .. | 1614.95 | 1372.85 | 2970.58 |
| | Single Parent Family Only | .. | 1728.59 | 2619.81 | 2677.16 |
| | Other Spending Unit: with relative only | .. | 1418.78 | 2106.23 | 2126.76 |
| | Other Spending Unit: with unrelated persons | .. | 2922.11 | 4119.56 | 4449.95 |
| Owned Living Quarters | Unattached Individuals | .. | 790.90 | 669.20 | 844.38 |
| | Married Only | .. | 2027.53 | 2299.97 | 2286.61 |
| | Married Family: youngest child < 5 yrs. | .. | 3284.67 | 4119.43 | |
| | Married Family: youngest 5-15 yrs. | .. | 3457.99 | 3975.36 | 3876.14 |
| | Married Family: youngest ≥ 16 yrs. | .. | 2563.28 | 3014.88 | |
| | Married Couple: with other relative only | .. | 3004.53 | 3703.25 | 3507.93 |
| | Married Couple: with unrelated persons | .. | 3659.10 | 3473.32 | 2368.18 |
| | Single Parent Family Only | .. | 1255.10 | 1495.61 | 1407.62 |
| | Other Spending Unit: with relative only | .. | 1642.46 | 1943.37 | 1635.92 |
| | Other Spending Unit: with unrelated persons | .. | 1441.41 | 1367.34 | 1098.70 |

**Table 2-7** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Repairs | Unattached Individuals | .. | 133.49 | 101.49 | 134.80 |
| | Married Only | .. | 337.20 | 412.58 | 384.36 |
| | Married Family: youngest child < 5 yrs. | .. | 281.71 | 437.55 | |
| | Married Family: youngest 5-15 yrs. | .. | 397.47 | 496.57 | 522.79 |
| | Married Family: youngest ≥ 16 yrs. | .. | 421.56 | 550.58 | |
| | Married Couple: with other relative only | .. | 347.89 | 455.78 | 454.75 |
| | Married Couple: with unrelated persons | .. | 318.98 | 349.75 | 319.91 |
| | Single Parent Family Only | .. | 276.07 | 230.63 | 268.02 |
| | Other Spending Unit: with relative only | .. | 249.41 | 566.91 | 358.85 |
| | Other Spending Unit: with unrelated persons | .. | 160.60 | 241.19 | 150.17 |
| Property Taxes | Unattached Individuals | .. | 222.08 | 211.38 | 266.21 |
| | Married Only | .. | 536.06 | 662.81 | 721.48 |
| | Married Family: youngest child < 5 yrs. | .. | 580.77 | 698.35 | |
| | Married Family: youngest 5-15 yrs. | .. | 762.20 | 978.35 | 907.03 |
| | Married Family: youngest ≥ 16 yrs. | .. | 877.51 | 1094.74 | |
| | Married Couple: with other relative only | .. | 738.66 | 895.22 | 909.06 |
| | Married Couple: with unrelated persons | .. | 786.99 | 581.74 | 583.36 |
| | Single Parent Family Only | .. | 341.07 | 382.69 | 381.36 |
| | Other Spending Unit: with relative only | .. | 456.20 | 519.95 | 556.53 |
| | Other Spending Unit: with unrelated persons | .. | 292.30 | 275.71 | 282.69 |
| Mortgage Interest | Unattached Individuals | .. | 301.14 | 234.56 | 252.62 |
| | Married Only | .. | 818.33 | 840.63 | 775.01 |
| | Married Family: youngest child < 5 yrs. | .. | 2058.51 | 2401.97 | |
| | Married Family: youngest 5-15 yrs. | .. | 1924.43 | 2071.61 | 1860.01 |
| | Married Family: youngest ≥ 16 yrs. | .. | 900.66 | 943.07 | |
| | Married Couple: with other relative only | .. | 1545.61 | 1787.22 | 1700.48 |
| | Married Couple: with unrelated persons | .. | 2139.03 | 2353.05 | 1058.57 |
| | Single Parent Family Only | .. | 451.00 | 595.37 | 521.49 |
| | Other Spending Unit: with relative only | .. | 652.48 | 593.52 | 336.03 |
| | Other Spending Unit: with unrelated persons | .. | 797.63 | 749.00 | 508.40 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration

## TABLE 2-8

## PROPORTION OF INCOME BEFORE TAXES SPENT ON HOUSING AND HOUSING RELATED ITEMS BY FAMILY COMPOSITION

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | Unattached Individuals | .. | .274 | .369 | .. |
| | Married Only | .. | .183 | .191 | .. |
| | Married Family: youngest child < 5 yrs. | .. | .193 | .210 | |
| | Married Family: youngest 5-15 yrs. | .. | .167 | .175 | .. |
| | Married Family: youngest ≥ 16 yrs. | .. | .141 | .131 | |
| | Married Couple: with other relative only | .. | .162 | .161 | .. |
| | Married Couple: with unrelated persons | .. | .228 | .164 | .. |
| | Single Parent Family Only | .. | .248 | .269 | .. |
| | Other Spending Unit: with relative only | .. | .193 | .209 | .. |
| | Other Spending Unit: with unrelated persons | .. | .196 | .209 | .. |
| Rented Living Quarters | Unattached Individuals | .. | .170 | .278 | .278 |
| | Married Only | .. | .055 | .076 | .062 |
| | Married Family: youngest child < 5 yrs. | .. | .049 | .072 | |
| | Married Family: youngest 5-15 yrs. | .. | .026 | .043 | .035 |
| | Married Family: youngest ≥ 16 yrs. | .. | .018 | .023 | |
| | Married Couple: with other relative only | .. | .036 | .028 | .049 |
| | Married Couple: with unrelated persons | .. | .080 | .043 | .122 |
| | Single Parent Family Only | .. | .127 | .171 | .183 |
| | Other Spending Unit: with relative only | .. | .075 | .106 | .094 |
| | Other Spending Unit: with unrelated persons | .. | .117 | .154 | .145 |
| Owned Living Quarters | Unattached Individuals | .. | .051 | .046 | .050 |
| | Married Only | .. | .073 | .068 | .071 |
| | Married Family: youngest child < 5 yrs. | .. | .100 | .100 | |
| | Married Family: youngest 5-15 yrs. | .. | .094 | .090 | .100 |
| | Married Family: youngest ≥ 16 yrs. | .. | .069 | .062 | |
| | Married Couple: with other relative only | .. | .078 | .090 | .072 |
| | Married Couple: with unrelated persons | .. | .102 | .079 | .041 |
| | Single Parent Family Only | .. | .058 | .051 | .055 |
| | Other Spending Unit: with relative only | .. | .060 | .070 | .057 |
| | Other Spending Unit: with unrelated persons | .. | .044 | .027 | .022 |

**Table 2-8** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Repairs | Unattached Individuals | .. | .046 | .039 | .052 |
| | Married Only | .. | .046 | .049 | .044 |
| | Married Family: youngest child < 5 yrs. | .. | .039 | .043 | .037 |
| | Married Family: youngest 5-15 yrs. | .. | .039 | .046 | |
| | Married Family: youngest ≥ 16 yrs. | .. | .041 | .051 | |
| | Married Couple: with other relative only | .. | .040 | .054 | .037 |
| | Married Couple: with unrelated persons | .. | .039 | .048 | .028 |
| | Single Parent Family Only | .. | .055 | .047 | .052 |
| | Other Spending Unit: with relative only | .. | .052 | .051 | .046 |
| | Other Spending Unit: with unrelated persons | .. | .029 | .025 | .019 |
| Property Taxes | Unattached Individuals | .. | .019 | .015 | .018 |
| | Married Only | .. | .024 | .023 | .025 |
| | Married Family: youngest child < 5 yrs. | .. | .018 | .017 | .022 |
| | Married Family: youngest 5-15 yrs. | .. | .021 | .023 | |
| | Married Family: youngest ≥ 16 yrs. | .. | .024 | .024 | |
| | Married Couple: with other relative only | .. | .020 | .022 | .019 |
| | Married Couple: with unrelated persons | .. | .023 | .015 | .010 |
| | Single Parent Family Only | .. | .016 | .014 | .015 |
| | Other Spending Unit: with relative only | .. | .020 | .023 | .021 |
| | Other Spending Unit: with unrelated persons | .. | .011 | .006 | .005 |
| Mortgage Interest | Unattached Individuals | .. | .013 | .011 | .010 |
| | Married Only | .. | .022 | .019 | .019 |
| | Married Family: youngest child < 5 yrs. | .. | .063 | .059 | .047 |
| | Married Family: youngest 5-15 yrs. | .. | .052 | .046 | |
| | Married Family: youngest ≥ 16 yrs. | .. | .023 | .019 | |
| | Married Couple: with other relative only | .. | .038 | .043 | .032 |
| | Married Couple: with unrelated persons | .. | .045 | .047 | .018 |
| | Single Parent Family Only | .. | .021 | .021 | .019 |
| | Other Spending Unit: with relative only | .. | .018 | .016 | .009 |
| | Other Spending Unit: with unrelated persons | .. | .020 | .015 | .011 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration

## TABLE 2-9

## PROPORTION OF TOTAL EXPENDITURE ON HOUSING AND HOUSING RELATED ITEMS BY FAMILY COMPOSITION

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | Unattached Individuals | .. | .317 | .324 | .. |
| | Married Only | .. | .243 | .249 | .. |
| | Married Family: youngest child < 5 yrs. | .. | .252 | .273 | |
| | Married Family: youngest 5-15 yrs. | .. | .217 | .223 | .. |
| | Married Family: youngest ≥ 16 yrs. | .. | .190 | .187 | |
| | Married Couple: with other relative only | .. | .214 | .217 | .. |
| | Married Couple: with unrelated persons | .. | .235 | .233 | .. |
| | Single Parent Family Only | .. | .267 | .286 | .. |
| | Other Spending Unit: with relative only | .. | .237 | .258 | .. |
| | Other Spending Unit: with unrelated persons | .. | .238 | .243 | .. |
| Rented Living Quarters | Unattached Individuals | .. | .191 | .229 | .. |
| | Married Only | .. | .067 | .090 | .. |
| | Married Family: youngest child < 5 yrs. | .. | .059 | .086 | |
| | Married Family: youngest 5-15 yrs. | .. | .030 | .045 | .. |
| | Married Family: youngest ≥ 16 yrs. | .. | .022 | .029 | |
| | Married Couple: with other relative only | .. | .043 | .033 | .. |
| | Married Couple: with unrelated persons | .. | .082 | .056 | .. |
| | Single Parent Family Only | .. | .132 | .170 | .. |
| | Other Spending Unit: with relative only | .. | .089 | .119 | .. |
| | Other Spending Unit: with unrelated persons | .. | .133 | .167 | .. |
| Owned Living Quarters | Unattached Individuals | .. | .166 | .048 | .057 |
| | Married Only | .. | .053 | .096 | .091 |
| | Married Family: youngest child < 5 yrs. | .. | .046 | .137 | |
| | Married Family: youngest 5-15 yrs. | .. | .025 | .122 | .111 |
| | Married Family: youngest ≥ 16 yrs. | .. | .017 | .090 | |
| | Married Couple: with other relative only | .. | .035 | .124 | |
| | Married Couple: with unrelated persons | .. | .080 | .116 | .057 |
| | Single Parent Family Only | .. | .124 | .063 | .057 |
| | Other Spending Unit: with relative only | .. | .073 | .079 | .065 |
| | Other Spending Unit: with unrelated persons | .. | .113 | .043 | .030 |

**Table 2-9** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Repairs | Unattached Individuals | .. | .054 | .039 | .048 |
| | Married Only | .. | .060 | .036 | .055 |
| | Married Family: youngest child < 5 yrs. | .. | .051 | .033 | |
| | Married Family: youngest 5-15 yrs. | .. | .051 | .034 | .046 |
| | Married Family: youngest ≥ 16 yrs. | .. | .056 | .035 | |
| | Married Couple: with other relative only | .. | .054 | .039 | .048 |
| | Married Couple: with unrelated persons | .. | .043 | .033 | .036 |
| | Single Parent Family Only | .. | .061 | .042 | .053 |
| | Other Spending Unit: with relative only | .. | .062 | .043 | .052 |
| | Other Spending Unit: with unrelated persons | .. | .037 | .021 | .024 |
| Property Taxes | Unattached Individuals | .. | .024 | .018 | .022 |
| | Married Only | .. | .034 | .033 | .033 |
| | Married Family: youngest child < 5 yrs. | .. | .025 | .025 | |
| | Married Family: youngest 5-15 yrs. | .. | .029 | .031 | .027 |
| | Married Family: youngest ≥ 16 yrs. | .. | .034 | .036 | |
| | Married Couple: with other relative only | .. | .029 | .032 | .026 |
| | Married Couple: with unrelated persons | .. | .019 | .024 | .015 |
| | Single Parent Family Only | .. | .020 | .017 | .017 |
| | Other Spending Unit: with relative only | .. | .027 | .026 | .024 |
| | Other Spending Unit: with unrelated persons | .. | .015 | .010 | .007 |
| Mortgage Interest | Unattached Individuals | .. | .016 | .012 | .012 |
| | Married Only | .. | .033 | .028 | .026 |
| | Married Family: youngest child < 5 yrs. | .. | .084 | .081 | |
| | Married Family: youngest 5-15 yrs. | .. | .068 | .063 | .054 |
| | Married Family: youngest ≥ 16 yrs. | .. | .030 | .026 | |
| | Married Couple: with other relative only | .. | .050 | .059 | .043 |
| | Married Couple: with unrelated persons | .. | .057 | .066 | .025 |
| | Single Parent Family Only | .. | .023 | .025 | .020 |
| | Other Spending Unit: with relative only | .. | .024 | .021 | .011 |
| | Other Spending Unit: with unrelated persons | .. | .028 | .023 | .014 |

**Note:** .. signifies that data are unavailable in the survey for the specific year under consideration.

items, there is no control for other variables. It might be noted though that household heads with the youngest child age 16 or older would be individuals usually in their 40s or 50s, which in Tables 2-2 and 2-3 were seen to spend low proportions on housing items. Which demographic factor is most important cannot be determined until later (in Chapter 4) when the regression analyses are undertaken.

**COUNTRY OF BIRTH:**

There are also differences according to where the head of household was born. These can be noted in Tables 2-10 and 2-11. It will be noted that as a percentage of total expenditures, amongst those for whom the country of birth is known, those who were born in Britain, USA, or Northern and Western Europe spend the most on housing. What is not clear is why. Those who came to Canada from these countries did so during or about the time of the second world war; which makes them now middle-aged or older with the pattern of expenditures of those in the older age bracket.

When we look at rented living quarters or rent expenditures, again as a percentage of total expenditures, it is clear that those born in Canada have a greater expenditure of this type, while for owned living quarters, those who came from the Southern and Eastern Europe tend to have the highest expenditures. Those who come from Other Asia have the highest percentage of expenditures going to mortgage interest whereas those from the Southern and Eastern Europe have the highest percentage of total spending going to property taxes, homeowner's insurance premiums and water, fuel, and electricity. This latter group, which is not the most recent immigrant group, would now be in their thirties and forties; the spending pattern is

## TABLE 2-10

## PROPORTION OF INCOME BEFORE TAXES SPENT ON HOUSING AND HOUSING RELATED ITEMS BY COUNTRY OF BIRTH

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | Canadian | .192 | .199 | .225 | .. |
| | Britain, USA, North/West Europe | .217 | .216 | .237 | .. |
| | South/East Europe | .196 | .195 | .210 | .. |
| | China and South/East Asia | | | .236 | |
| | Other Asia | .208 | .228 | .859 | .. |
| | Other Not Stated | | | .252 | |
| Principal Accommodation | Canadian | .. | .192 | .218 | .. |
| | Britain, USA, North/West Europe | .. | .207 | .227 | .. |
| | South/East Europe | .. | .189 | .205 | .. |
| | China and South/East Asia | .. | | .230 | .. |
| | Other Asia | .. | .222 | .854 | .. |
| | Other Not Stated | .. | | .247 | .. |
| Rented Living Quarters | Canadian | .072 | .077 | .117 | .118 |
| | Britain, USA, North/West Europe | .073 | .079 | .114 | .092 |
| | South/East Europe | .047 | .046 | .068 | .057 |
| | China and South/East Asia | | | .128 | .103 |
| | Other Asia | .103 | .105 | .732 | .073 |
| | Other Not Stated | | | .159 | .166 |
| Rent | Canadian | .. | .075 | .114 | .114 |
| | Britain, USA, North/West Europe | .. | .077 | .112 | .090 |
| | South/East Europe | .. | .044 | .066 | .056 |
| | China and South/East Asia | .. | | .127 | .103 |
| | Other Asia | .. | .104 | .731 | .072 |
| | Other Not Stated | .. | | .156 | .164 |
| Owned Living Quarters | Canadian | .069 | .071 | .064 | .065 |
| | Britain, USA, North/West Europe | .089 | .085 | .076 | .083 |
| | South/East Europe | .096 | .093 | .090 | .094 |
| | China and South/East Asia | | | .073 | .437 |
| | Other Asia | .076 | .090 | .096 | .105 |
| | Other Not Stated | | | .063 | .063 |
| Maintenance, Repair and Replacements | Canadian | .. | .011 | .011 | .. |
| | Britain, USA, North/West Europe | .. | .013 | .014 | .. |
| | South/East Europe | .. | .016 | .015 | .. |
| | China and South/East Asia | .. | | .009 | .. |
| | Other Asia | .. | .006 | .005 | .. |
| | Other Not Stated | .. | | .006 | .. |

Table 2-10 (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Contract and Labour Costs | Canadian | .. | .. | .008 | .007 |
| | Britain, USA, North/West Europe | .. | .. | .011 | .010 |
| | South/East Europe | .. | .. | .011 | .011 |
| | China and South/East Asia | .. | .. | .005 | .144 |
| | Other Asia | .. | .. | .004 | .005 |
| | Other Not Stated | .. | .. | .004 | .007 |
| Materials | Canadian | .. | .. | .003 | .004 |
| | Britain, USA, North/West Europe | .. | .. | .003 | .004 |
| | South/East Europe | .. | .. | .004 | .005 |
| | China and South/East Asia | .. | .. | .004 | .001 |
| | Other Asia | .. | .. | .002 | .003 |
| | Other Not Stated | .. | .. | .001 | .004 |
| Property Taxes | Canadian | .. | .019 | .018 | .018 |
| | Britain, USA, North/West Europe | .. | .025 | .021 | .026 |
| | South/East Europe | .. | .036 | .032 | .038 |
| | China and South/East Asia | .. | [ | .018 | .062 |
| | Other Asia | .. | .016 | .017 | .019 |
| | Other Not Stated | .. | [ | .012 | .013 |
| Homeowner's Insurance Premium | Canadian | .. | .. | .005 | .006 |
| | Britain, USA, North/West Europe | .. | .. | .006 | .007 |
| | South/East Europe | .. | .. | .007 | .008 |
| | China and South/East Asia | .. | .. | .004 | .018 |
| | Other Asia | .. | .. | .004 | .004 |
| | Other Not Stated | .. | .. | .002 | .003 |
| Mortgage Interest | Canadian | .. | .030 | .026 | .025 |
| | Britain, USA, North/West Europe | .. | .035 | .026 | .027 |
| | South/East Europe | .. | .029 | .025 | .023 |
| | China and South/East Asia | .. | [ | .036 | .197 |
| | Other Asia | .. | .055 | .053 | .058 |
| | Other Not Stated | .. | [ | .036 | .026 |
| Water, Fuel, and Electricity | Canadian | .043 | .. | .044 | .044 |
| | Britain, USA, North/West Europe | .048 | .. | .047 | .042 |
| | South/East Europe | .047 | .. | .063 | .047 |
| | China and South/East Asia | [ | .. | .040 | .047 |
| | Other Asia | .023 | .. | .037 | .023 |
| | Other Not Stated | [ | .. | .031 | .023 |
| Water | Canadian | .. | .. | .003 | .003 |
| | Britain, USA, North/West Europe | .. | .. | .003 | .004 |
| | South/East Europe | .. | .. | .004 | .004 |
| | China and South/East Asia | .. | .. | .004 | .002 |
| | Other Asia | .. | .. | .003 | .002 |
| | Other Not Stated | .. | .. | .002 | .002 |

Table 2-10 (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Fuel Oil and Other Liquid Fuel | Canadian | .. | .. | .006 | .007 |
| | Britain, USA, North/West Europe | .. | .. | .006 | .006 |
| | South/East Europe | .. | .. | .011 | .006 |
| | China and South/East Asia | .. | .. | .001 | .003 |
| | Other Asia | .. | .. | .003 | .001 |
| | Other Not Stated | .. | .. | .001 | .001 |
| Piped Gas | Canadian | .. | .. | .008 | .007 |
| | Britain, USA, North/West Europe | .. | .. | .012 | .011 |
| | South/East Europe | .. | .. | .015 | .017 |
| | China and South/East Asia | .. | .. | .013 | .018 |
| | Other Asia | .. | .. | .011 | .009 |
| | Other Not Stated | .. | .. | .010 | .006 |
| Other Fuels | Canadian | .. | .. | .001 | .002 |
| | Britain, USA, North/West Europe | .. | .. | .001 | .001 |
| | South/East Europe | .. | .. | .001 | .001 |
| | China and South/East Asia | .. | .. | .001 | .000 |
| | Other Asia | .. | .. | .000 | .000 |
| | Other Not Stated | .. | .. | .000 | .000 |
| Electricity | Canadian | .. | .. | .019 | .025 |
| | Britain, USA, North/West Europe | .. | .. | .015 | .020 |
| | South/East Europe | .. | .. | .016 | .019 |
| | China and South/East Asia | .. | .. | .011 | .024 |
| | Other Asia | .. | .. | .010 | .011 |
| | Other Not Stated | .. | .. | .013 | .012 |
| Other Accommodation | Canadian | .008 | .. | .008 | .009 |
| | Britain, USA, North/West Europe | .007 | .. | .001 | .010 |
| | South/East Europe | .005 | .. | .006 | .007 |
| | China and South/East Asia | | .. | .006 | .005 |
| | Other Asia | .006 | .. | .005 | .005 |
| | Other Not Stated | | .. | .005 | .006 |
| Traveller Accommodation | Canadian | .. | .. | .. | .004 |
| | Britain, USA, North/West Europe | .. | .. | .. | .006 |
| | South/East Europe | .. | .. | .. | .003 |
| | China and South/East Asia | .. | .. | .. | .003 |
| | Other Asia | .. | .. | .. | .004 |
| | Other Not Stated | .. | .. | .. | .003 |

## TABLE 2-11

## PROPORTION OF TOTAL EXPENDITURE SPENT ON HOUSING AND HOUSING RELATED ITEMS BY COUNTRY OF BIRTH

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | Canadian | .181 | .199 | .207 | .195 |
| | Britain, USA, North/West Europe | .208 | .222 | .221 | .210 |
| | South/East Europe | .188 | .204 | .208 | .193 |
| | China and South/East Asia | | | .198 | .200 |
| | Other Asia | .197 | .205 | .194 | .183 |
| | Other Not Stated | | | .230 | .222 |
| Principal Accommodation | Canadian | .. | .191 | .200 | .186 |
| | Britain, USA, North/West Europe | .. | .213 | .211 | .200 |
| | South/East Europe | .. | .197 | .202 | .186 |
| | China and South/East Asia | .. | | .194 | .195 |
| | Other Asia | .. | .209 | .189 | .179 |
| | Other Not Stated | .. | | .226 | .216 |
| Rented Living Quarters | Canadian | .064 | .074 | .103 | .084 |
| | Britain, USA, North/West Europe | .067 | .079 | .097 | .078 |
| | South/East Europe | .043 | .044 | .057 | .053 |
| | China and South/East Asia | | | .089 | .078 |
| | Other Asia | .092 | .091 | .078 | .069 |
| | Other Not Stated | | | .139 | .139 |
| Rent | Canadian | .. | .071 | .100 | .082 |
| | Britain, USA, North/West Europe | .. | .077 | .096 | .077 |
| | South/East Europe | .. | .043 | .055 | .052 |
| | China and South/East Asia | .. | | .088 | .078 |
| | Other Asia | .. | .090 | .077 | .069 |
| | Other Not Stated | .. | | .139 | .137 |
| Owned Living Quarters | Canadian | .067 | .072 | .062 | .063 |
| | Britain, USA, North/West Europe | .085 | .089 | .077 | .081 |
| | South/East Europe | .093 | .099 | .094 | .089 |
| | China and South/East Asia | | | .074 | .090 |
| | Other Asia | .077 | .091 | .083 | .087 |
| | Other Not Stated | | | .062 | .056 |
| Maintenance, Repair and Replacements | Canadian | .. | .011 | .010 | .010 |
| | Britain, USA, North/West Europe | .. | .013 | .013 | .013 |
| | South/East Europe | .. | .017 | .017 | .015 |
| | China and South/East Asia | .. | | .009 | .010 |
| | Other Asia | .. | .006 | .006 | .008 |
| | Other Not Stated | .. | | .005 | .011 |

Table 2-11 (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Contract and Labour Costs | Canadian | .. | .. | .007 | .006 |
| | Britain, USA, North/West Europe | .. | .. | .010 | .010 |
| | South/East Europe | .. | .. | .012 | .010 |
| | China and South/East Asia | .. | .. | .005 | .009 |
| | Other Asia | .. | .. | .004 | .005 |
| | Other Not Stated | .. | .. | .004 | .007 |
| Materials | Canadian | .. | .. | .003 | .004 |
| | Britain, USA, North/West Europe | .. | .. | .003 | .003 |
| | South/East Europe | .. | .. | .004 | .005 |
| | China and South/East Asia | .. | .. | .004 | .001 |
| | Other Asia | .. | .. | .002 | .003 |
| | Other Not Stated | .. | .. | .002 | .003 |
| Property Taxes | Canadian | .. | .020 | .019 | .018 |
| | Britain, USA, North/West Europe | .. | .027 | .022 | .026 |
| | South/East Europe | .. | .040 | .035 | .036 |
| | China and South/East Asia | .. | | .020 | .022 |
| | Other Asia | .. | .017 | .018 | .017 |
| | Other Not Stated | .. | | .012 | .012 |
| Homeowner's Insurance Premium | Canadian | .. | .006 | .005 | .005 |
| | Britain, USA, North/West Europe | .. | .006 | .006 | .007 |
| | South/East Europe | .. | .004 | .008 | .008 |
| | China and South/East Asia | .. | | .004 | .004 |
| | Other Asia | .. | .004 | .004 | .004 |
| | Other Not Stated | .. | | .003 | .003 |
| Mortgage | Canadian | .. | .031 | .026 | .024 |
| | Britain, USA, North/West Europe | .. | .036 | .026 | .026 |
| | South/East Europe | .. | .029 | .035 | .046 |
| | China and South/East Asia | .. | | .035 | .046 |
| | Other Asia | .. | .056 | .050 | .048 |
| | Other Not Stated | .. | | .036 | .023 |
| Water, Fuel, and Electricity | Canadian | .043 | .045 | .034 | .040 |
| | Britain, USA, North/West Europe | .049 | .045 | .037 | .041 |
| | South/East Europe | .047 | .054 | .051 | .043 |
| | China and South/East Asia | | | .031 | .027 |
| | Other Asia | .023 | .028 | .028 | .022 |
| | Other Not Stated | | | .025 | .021 |
| Water | Canadian | .. | .003 | .003 | .003 |
| | Britain, USA, North/West Europe | .. | .003 | .003 | .004 |
| | South/East Europe | .. | .005 | .005 | .004 |
| | China and South/East Asia | .. | | .004 | .002 |
| | Other Asia | .. | .002 | .003 | .003 |
| | Other Not Stated | .. | | .002 | .002 |

Table 2-11 (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Fuel Oil and Other Liquid Fuel | Canadian | .. | .012 | .006 | .007 |
| | Britain, USA, North/West Europe | .. | .009 | .006 | .006 |
| | South/East Europe | .. | .011 | .013 | .006 |
| | China and South/East Asia | .. | .004 | .001 | .003 |
| | Other Asia | .. | | .003 | .001 |
| | Other Not Stated | .. | | .001 | .001 |
| Piped Gas | Canadian | .. | .007 | .008 | .006 |
| | Britain, USA, North/West Europe | .. | .011 | .012 | .011 |
| | South/East Europe | .. | .017 | .016 | .015 |
| | China and South/East Asia | .. | .003 | .013 | .009 |
| | Other Asia | .. | | .012 | .008 |
| | Other Not Stated | .. | | .010 | .006 |
| Other Fuels | Canadian | .. | .002 | .001 | .001 |
| | Britain, USA, North/West Europe | .. | .002 | .001 | .001 |
| | South/East Europe | .. | .001 | .001 | .001 |
| | China and South/East Asia | .. | .000 | .001 | .000 |
| | Other Asia | .. | | .000 | .000 |
| | Other Not Stated | .. | | .000 | .000 |
| Electricity | Canadian | .. | .021 | .017 | .022 |
| | Britain, USA, North/West Europe | .. | .017 | .013 | .019 |
| | South/East Europe | .. | .020 | .017 | .018 |
| | China and South/East Asia | .. | .013 | .012 | .013 |
| | Other Asia | .. | | .011 | .010 |
| | Other Not Stated | .. | | .012 | .011 |
| Other Accommodation | Canadian | .007 | .008 | .008 | .009 |
| | Britain, USA, North/West Europe | .007 | .010 | .010 | .010 |
| | South/East Europe | .005 | .007 | .006 | .007 |
| | China and South/East Asia | .006 | .006 | .004 | .005 |
| | Other Asia | | | .005 | .005 |
| | Other Not Stated | | | .005 | .006 |
| Traveller Accommodation | Canadian | .. | .005 | .005 | .004 |
| | Britain, USA, North/West Europe | .. | .006 | .006 | .006 |
| | South/East Europe | .. | .003 | .003 | .003 |
| | China and South/East Asia | .. | .004 | .003 | .004 |
| | Other Asia | .. | | .002 | .003 |
| | Other Not Stated | .. | | .003 | .003 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

consistent with what we observed in the section on age, where we saw a high proportion of income or total spending going towards ownership for the middle age groups.

**YEAR OF ARRIVAL**

Perhaps the data relating to expenditures by country of birth will make more sense when the time of arrival in Canada is examined. There is a correlation between period of immigration and age. For example, those who came from Northern and Western Europe tended to come around the time of the second world war and the immediately following years when they were still relatively young, which makes them part of the older residents now. That was followed by a wave of immigration from Southern and Eastern Europe and then more recently by Asians. Thus, amongst the foreign-born, the age pattern probably dominates over their country of origin. Examining the time of arrival just confirms that hypothesis.

Tables 2-12 and 2-13 relate expenditures according to when the household head arrived in Canada, if they were foreign born. Note in Table 2-12 the unusual figures in 1984 for those arriving between 1971 and 1975 (a sample size of significant enough numbers that this ought not be an anomaly) and the 1986 figure for those who had just arrived. These numbers are not repeated in Table 2-13, suggesting that before-tax income is the culprit in Table 2-12, not spending. Note also that immigrants arriving prior to 1946 act much more like the older age groups in Table 2-2 and 2-3.

**GENDER OF HOUSEHOLD HEAD**

Tables 2-14 and 2-16 concentrate on the absolute spending as well as the proportions of before-tax income and total expenditures by whether the

## TABLE 2-12

## PROPORTION OF BEFORE-TAX INCOME SPENT ON SHELTER AND HOUSING RELATED EXPENDITURE BY IMMIGRANT ARRIVAL YEAR

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| **Shelter** | | | | |
| Before 1946 | .232 | .240 | .266 | .272 |
| 1946 - 1955 | | .192 | .204 | .209 |
| 1956 - 1960 | | .196 | .190 | .210 |
| 1961 - 1965 | .199 | .190 | .203 | .173 |
| 1966 - 1970 | | .206 | .244 | .203 |
| 1971 - 1975 | | .241 | .515 | .224 |
| 1976 - 1978 | .216 | .229 | .264 | .249 |
| 1979 - 1980 | | .241 | .236 | .246 |
| 1981 - 1982 | | .272 | .233 | .255 |
| 1983 - 1986[a] | | | .261 | .883 |
| **Rental Quarters** | | | | |
| Before 1946 | .061 | .093 | .121 | .112 |
| 1947 - 1955 | | .050 | .059 | .055 |
| 1956 - 1960 | | .061 | .073 | .070 |
| 1961 - 1965 | .068 | .042 | .090 | .060 |
| 1966 - 1970 | | .060 | .123 | .066 |
| 1971 - 1975 | | .109 | .388 | .091 |
| 1976 - 1978 | .137 | .104 | .156 | .162 |
| 1979 - 1980 | | .159 | .163 | .145 |
| 1981 - 1982 | | .220 | .176 | .190 |
| 1983 - 1986[a] | | | .120 | .165 |
| **Owned Living Quarters** | | | | |
| Before 1946 | .088 | .077 | .080 | .089 |
| 1946 - 1955 | | .085 | .092 | .097 |
| 1956 - 1960 | | .087 | .070 | .090 |
| 1961 - 1965 | .092 | .101 | .072 | .072 |
| 1966 - 1970 | | .109 | .087 | .101 |
| 1971 - 1975 | | .098 | .093 | .098 |
| 1976 - 1978 | .063 | .092 | .069 | .058 |
| 1979 - 1980 | | .058 | .044 | .077 |
| 1981 - 1982 | | .036 | .037 | .037 |
| 1983 - 1986[a] | | | .118 | .661 |

Note: [a] refers to the fact that in 1984, the years in this category are 1983-1984.

## TABLE 2-13

## PROPORTION OF TOTAL SPENDING SPENT ON SHELTER AND HOUSING RELATED ITEMS BY IMMIGRANT ARRIVAL YEAR

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| **Shelter** | | | | |
| Before 1946 | .237 | .261 | .282 | .266 |
| 1946 - 1955 | | .195 | .200 | .202 |
| 1956 - 1960 | | .119 | .188 | .184 |
| 1961 - 1965 | .186 | .195 | .203 | .173 |
| 1966 - 1970 | | .207 | .190 | .192 |
| 1971 - 1975 | | .224 | .218 | .187 |
| 1976 - 1978 | .187 | .217 | .217 | .218 |
| 1979 - 1980 | | .216 | .231 | .204 |
| 1981 - 1982 | | .249 | .192 | .204 |
| 1983 - 1986[a] | | | .220 | .206 |
| **Rental Quarters** | | | | |
| Before 1946 | .064 | .101 | .133 | .115 |
| 1946 - 1955 | . | .046 | .049 | .052 |
| 1956 - 1960 | | .060 | .068 | .053 |
| 1961 - 1965 | .060 | .038 | .086 | .060 |
| 1966 - 1970 | | .057 | .068 | .059 |
| 1971 - 1975 | | .091 | .098 | .069 |
| 1976 - 1978 | .112 | .092 | .108 | .134 |
| 1979 - 1980 | | .138 | .155 | .107 |
| 1981 - 1982 | | .200 | .129 | .144 |
| 1983 - 1986[a] | | | .110 | .136 |
| **Owned Living Quarters** | | | | |
| Before 1946 | .086 | .084 | .077 | .080 |
| 1946 - 1955 | | .087 | .,095 | .094 |
| 1956 - 1960 | | .089 | .073 | .084 |
| 1961 - 1965 | .086 | .109 | .076 | .071 |
| 1966 - 1970 | | .111 | .088 | .097 |
| 1971 - 1975 | | .100 | .087 | .085 |
| 1976 - 1978 | .059 | .092 | .074 | .056 |
| 1979 - 1980 | | .056 | .047 | .074 |
| 1981 - 1982 | | .034 | .043 | .036 |
| 1983 - 1986[a] | | | .089 | .047 |

Note: [a] refers to the fact that in 1984, the years in this category are 1983-1984.

TABLE 2-14

ABSOLUTE SPENDING ON SHELTER AND HOUSING RELATED ITEMS BY GENDER OF HOUSEHOLD HEAD

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | Male | 3225.75 | 4939.84 | 5872.99 | 5967.67 |
| | Female | 2361.82 | 3974.48 | 4628.77 | 5009.48 |
| Principal Accommodation | | | | | |
| | Male | .. | 4635.28 | 5609.04 | 5566.62 |
| | Female | .. | 3801.13 | 4457.35 | 4752.90 |
| Rented Quarters | | | | | |
| | Male | 694.75 | 1067.43 | 1647.28 | 1417.87 |
| | Female | 1306.10 | 1743.02 | 2568.03 | 2419.48 |
| Rent | Male | .. | 1020.87 | 1592.26 | 1375.52 |
| | Female | .. | 1690.90 | 2494.49 | 2360.18 |
| Owned Quarters | | | | | |
| | Male | 1669.64 | 2534.15 | 2872.73 | 2941.23 |
| | Female | 549.47 | 1331.72 | 1238.29 | 1509.66 |
| Property Tax | | | | | |
| | Male | .. | 604.75 | 731.66 | 754.47 |
| | Female | .. | 346.36 | 348.88 | 423.83 |
| Mortgage Interest | | | | | |
| | Male | .. | 1281.12 | 1319.70 | 1307.09 |
| | Female | .. | 561.64 | 496.48 | 537.85 |
| Repairs | Male | .. | 324.18 | 420.36 | 418.18 |
| | Female | .. | 213.41 | 196.42 | 253.92 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

## TABLE 2-15

## PROPORTION OF BEFORE-TAX INCOME SPENT ON SHELTER AND HOUSING RELATED ITEMS BY GENDER OF HOUSEHOLD HEAD

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | Male | .177 | .180 | .216 | .185 |
| | Female | .272 | .259 | .284 | .362 |
| Principal Accommodation | | | | | |
| | Male | .. | .172 | .207 | .176 |
| | Female | .. | .252 | .278 | .355 |
| Rented Quarters | | | | | |
| | Male | .050 | .052 | .100 | .063 |
| | Female | .156 | .141 | .187 | .227 |
| Rent | Male | .. | .050 | .095 | .061 |
| | Female | .. | .137 | .182 | .220 |
| Owned Quarters | | | | | |
| | Male | .079 | .079 | .074 | .074 |
| | Female | .053 | .061 | .053 | .075 |
| Property Tax | | | | | |
| | Male | .. | .020 | .020 | .020 |
| | Female | .. | .020 | .018 | .020 |
| Mortgage Interest | | | | | |
| | Male | .. | .036 | .031 | .030 |
| | Female | .. | .019 | .016 | .023 |
| Repairs | Male | .. | .011 | .011 | .011 |
| | Female | .. | .011 | .011 | .018 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

## TABLE 2-16

## PROPORTION OF TOTAL SPENDING SPENT ON SHELTER AND HOUSING RELATED ITEMS BY GENDER OF HOUSEHOLD HEAD

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | Male | .169 | .183 | .186 | .176 |
| | Female | .246 | .252 | .264 | .245 |
| Principal Accommodation | | | | | |
| | Male | .. | .174 | .176 | .167 |
| | Female | .. | .245 | .258 | .238 |
| Rented Quarters | | | | | |
| | Male | .045 | .051 | .069 | .057 |
| | Female | .139 | .134 | .172 | .143 |
| Rent | Male | .. | .049 | .068 | .056 |
| | Female | .. | .130 | .168 | .140 |
| Owned Quarters | | | | | |
| | Male | .077 | .082 | .074 | .072 |
| | Female | .048 | .061 | .050 | .052 |
| Property Tax | | | | | |
| | Male | .. | .022 | .021 | .020 |
| | Female | .. | .021 | .017 | .018 |
| Mortgage Interest | | | | | |
| | Male | .. | .037 | .031 | .030 |
| | Female | .. | .019 | .016 | .014 |
| Repairs | Male | .. | .012 | .011 | .010 |
| | Female | .. | .011 | .009 | .010 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

household is headed by a male or female. Except for rental quarters and rent, male-headed households spend more on housing but this is not reflected in the ratio of spending to before-tax income or total expenditures. It is clear then that the affordability problem for female-headed households then lies in the low income levels, not in the amount being spent.

## GEOGRAPHIC AND ECONOMIC CHARACTERISTICS

This section of the Chapter considers some non-demographic variables that are either geographic or economic in nature. Our purpose in including them in the study is to be able to demonstrate their importance along with demographics in explaining the spending by households on shelter and housing-related items.

### REGION

The data relating to region and housing expenditures, indicate that there are significant differences in both the proportion of before-tax-income (Table 2-17) and total expenditures (Table 2-18) being allocated to shelter among regions, with British Columbia and Quebec often being higher than the other regions.

It is also very striking that when one compares rent and expenses on owned living quarters, there is a significant variation. Quebec is significantly higher than any other region when rent is compared, particularly in 1984 and 1986 and it does not matter whether one is looking at before-tax-income as in Table 2-17 or total expenditures as in Table 2-18 as the base. On the other hand, owned living quarters take a larger proportion of before-tax-income and total expenditures in British Columbia (certainly in

## TABLE 2-17

## PROPORTION OF INCOME BEFORE TAXES SPENT ON HOUSING AND HOUSING RELATED ITEMS BY REGION

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | Atlantic | .177 | .179 | .208 | .. |
| | Quebec | .181 | .202 | .247 | .. |
| | Ontario | .211 | .200 | .235 | .. |
| | Man. & Sask. / Alberta | .188 | .200 | .221 | .. |
| | B.C. | .203 | .228 | .241 | .. |
| Principal Accommodation | Atlantic | .. | .171 | .201 | .181 |
| | Quebec | .. | .194 | .240 | .288 |
| | Ontario | .. | .191 | .228 | .201 |
| | Man. & Sask. / Alberta | .. | .192 | .213 | .208 / .197 |
| | B.C. | .. | .220 | .232 | .263 |
| Rented Living Quarters | Atlantic | .041 | .050 | .086 | .058 |
| | Quebec | .073 | .090 | .138 | .185 |
| | Ontario | .079 | .071 | .130 | .090 |
| | Man. & Sask. / Alberta | .066 | .071 | .102 | .084 / .086 |
| | B.C. | .075 | .091 | .123 | .097 |
| Rent | Atlantic | .. | .048 | .084 | .057 |
| | Quebec | .. | .085 | .131 | .177 |
| | Ontario | .. | .069 | .128 | .089 |
| | Man. & Sask. / Alberta | .. | .070 | .101 | .082 / .085 |
| | B.C. | .. | .090 | .122 | .095 |
| Owned Living Quarters | Atlantic | .064 | .055 | .060 | .058 |
| | Quebec | .062 | .062 | .062 | .057 |
| | Ontario | .082 | .080 | .067 | .075 |
| | Man. & Sask. / Alberta | .072 | .076 | .074 | .077 / .073 |
| | B.C. | .082 | .091 | .077 | .126 |
| Maintenance, Repairs and Replacements | Atlantic | .025 | .015 | .011 | .. |
| | Quebec | .014 | .010 | .012 | .. |
| | Ontario | .018 | .012 | .010 | .. |
| | Man. & Sask. / Alberta | .017 | .010 | .011 | .. |
| | B.C. | .013 | .011 | .010 | .. |

**Table 2-17 (continued)**

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Contract and Labour Costs | Atlantic | .. | .. | .007 | .009 |
| | Quebec | .. | .. | .010 | .006 |
| | Ontario | .. | .. | .080 | .008 |
| | Man. & Sask. } | .. | .. | .007 | .010 |
| | Alberta } | | | | .005 |
| | B.C. | .. | .. | .007 | .024 |
| Materials | Atlantic | .. | .. | .004 | .005 |
| | Quebec | .. | .. | .003 | .003 |
| | Ontario | .. | .. | .003 | .004 |
| | Man. & Sask. } | .. | .. | .003 | .004 |
| | Alberta } | | | | .003 |
| | B.C. | .. | .. | .003 | .003 |
| Property Taxes | Atlantic | .011 | .010 | .011 | .012 |
| | Quebec | .018 | .019 | .020 | .018 |
| | Ontario | .023 | .023 | .019 | .022 |
| | Man. & Sask. } | .020 | .021 | .021 | .026 |
| | Alberta } | | | | .015 |
| | B.C. | .021 | .023 | .016 | .027 |
| Homeowner's Insurance Premiums | Atlantic | .005 | .006 | .005 | .006 |
| | Quebec | .004 | .007 | .005 | .006 |
| | Ontario | .004 | .006 | .004 | .006 |
| | Man. & Sask. } | .004 | .005 | .005 | .007 |
| | Alberta } | | | | .004 |
| | B.C. | .004 | .005 | .005 | .007 |
| Mortgage Interest | Atlantic | .022 | .022 | .027 | .022 |
| | Quebec | .024 | .024 | .019 | .019 |
| | Ontario | .032 | .034 | .026 | .026 |
| | Man. & Sask. } | .028 | .035 | .033 | .023 |
| | Alberta } | | | | .039 |
| | B.C. | .037 | .043 | .036 | .053 |
| Water, Fuel, and Electricity | Atlantic | .068 | .066 | .067 | .065 |
| | Quebec | .039 | .042 | .045 | .047 |
| | Ontario | .042 | .040 | .042 | .036 |
| | Man. & Sask. } | .043 | .045 | .048 | .048 |
| | Alberta } | | | | .038 |
| | B.C. | .039 | .038 | .043 | .040 |
| Water | Atlantic | .002 | .002 | .003 | .003 |
| | Quebec | .003 | .002 | .002 | .003 |
| | Ontario | .003 | .003 | .003 | .003 |
| | Man. & Sask. } | .005 | .005 | .006 | .005 |
| | Alberta } | | | | .007 |
| | B.C. | .003 | .002 | .001 | .003 |

**Table 2-17** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Fuel Oil and Other Liquid Fuel | Atlantic | .033 | .030 | .025 | .024 |
| | Quebec | .013 | .012 | .008 | .006 |
| | Ontario | .012 | .009 | .005 | .006 |
| | Man. & Sask. | .006 | .005 | .001 | .004 |
| | Alberta | | | | .001 |
| | B.C. | .007 | .008 | .005 | .003 |
| Piped Gas | Atlantic | .000 | .001 | .000 | .000 |
| | Quebec | .002 | .002 | .002 | .002 |
| | Ontario | .009 | .011 | .012 | .010 |
| | Man. & Sask. | .013 | .016 | .017 | .015 |
| | Alberta | | | | .013 |
| | B.C. | .008 | .007 | .008 | .012 |
| Other Fuels | Atlantic | .004 | .005 | .002 | .007 |
| | Quebec | .001 | .002 | .001 | .002 |
| | Ontario | .002 | .001 | .001 | .001 |
| | Man. & Sask. | .002 | .001 | .000 | .001 |
| | Alberta | | | | .001 |
| | B.C. | .001 | .002 | .001 | .001 |
| Electricity | Atlantic | .028 | .028 | .027 | .031 |
| | Quebec | .020 | .025 | .028 | .035 |
| | Ontario | .017 | .016 | .011 | .017 |
| | Man. & Sask. | .018 | .017 | .013 | .023 |
| | Alberta | | | | .016 |
| | B.C. | .020 | .019 | .017 | .021 |
| Other Accommodation | Atlantic | .004 | .008 | .008 | .006 |
| | Quebec | .008 | .007 | .007 | .007 |
| | Ontario | .008 | .009 | .008 | .010 |
| | Man. & Sask. | .007 | .008 | .008 | .009 |
| | Alberta | | | | .009 |
| | B.C. | .008 | .007 | .009 | .008 |
| Traveller Accommodation | Atlantic | .. | .004 | .004 | .003 |
| | Quebec | .. | .004 | .004 | .003 |
| | Ontario | .. | .005 | .004 | .005 |
| | Man. & Sask. | .. | .005 | .005 | .005 |
| | Alberta | .. | | | .006 |
| | B.C. | .. | .005 | .006 | .004 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

## TABLE 2-18

## PROPORTION OF TOTAL EXPENDITURE SPENT ON HOUSING AND HOUSING RELATED ITEMS BY REGION

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | Atlantic | .173 | .222 | .248 | .. |
| | Quebec | .173 | .243 | .261 | .. |
| | Ontario | .195 | .254 | .252 | .. |
| | Man. & Sask. ) | .180 | .255 | .265 | .. |
| | Alberta ) | | | | .. |
| | B.C. | .194 | .276 | .288 | .. |
| Principal Accommodation | Atlantic | .. | .213 | .238 | .. |
| | Quebec | .. | .233 | .252 | .. |
| | Ontario | .. | .242 | .241 | .. |
| | Man. & Sask. ) | .. | .245 | .254 | .. |
| | Alberta ) | | | | .. |
| | B.C. | .. | .266 | .276 | .. |
| Rented Living Quarters | Atlantic | .038 | .058 | .094 | .. |
| | Quebec | .067 | .102 | .131 | .. |
| | Ontario | .067 | .082 | .108 | .. |
| | Man. & Sask. ) | .059 | .085 | .109 | .. |
| | Alberta ) | | | | .. |
| | B.C. | .069 | .098 | .131 | .. |
| Rent | Atlantic | .. | .056 | .093 | .060 |
| | Quebec | .. | .096 | .126 | .111 |
| | Ontario | .. | .080 | .105 | .098 |
| | Man. & Sask. ) | .. | .083 | .107 | .081 |
| | Alberta ) | | | | .094 |
| | B.C. | .. | .096 | .130 | .099 |
| Owned Living Quarters | Atlantic | .063 | .048 | .077 | .071 |
| | Quebec | .061 | .085 | .076 | .070 |
| | Ontario | .079 | .069 | .091 | .095 |
| | Man. & Sask. ) | .070 | .070 | .097 | .088 |
| | Alberta ) | | | | .095 |
| | B.C. | .079 | .090 | .102 | .097 |
| Maintenance, Repairs and Replacements | Atlantic | .024 | .019 | .014 | .. |
| | Quebec | .013 | .012 | .014 | .. |
| | Ontario | .017 | .015 | .014 | .. |
| | Man. & Sask. ) | .016 | .014 | .013 | .. |
| | Alberta ) | | | | .. |
| | B.C. | .012 | .014 | .013 | .. |

**Table 2-18** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Contract and Labour Costs | Atlantic | .. | .. | .009 | .011 |
| | Quebec | .. | .. | .010 | .007 |
| | Ontario | .. | .. | .011 | .010 |
| | Man. & Sask. } Alberta | .. | .. | .009 | .011<br>.007 |
| | B.C. | .. | .. | .010 | .007 |
| Materials | Atlantic | .. | .. | .006 | .007 |
| | Quebec | .. | .. | .004 | .004 |
| | Ontario | .. | .. | .004 | .005 |
| | Man. & Sask. } Alberta | .. | .. | .004 | .005<br>.004 |
| | B.C. | .. | .. | .004 | .004 |
| Property Taxes | Atlantic | .011 | .014 | .015 | .015 |
| | Quebec | .018 | .025 | .027 | .023 |
| | Ontario | .024 | .032 | .027 | .030 |
| | Man. & Sask. } Alberta | .020 | .029 | .029 | .030<br>.020 |
| | B.C. | .021 | .032 | .024 | .028 |
| Homeowner's Insurance Premiums | Atlantic | .005 | .007 | .007 | .008 |
| | Quebec | .004 | .009 | .007 | .008 |
| | Ontario | .004 | .008 | .006 | .007 |
| | Man. & Sask. } Alberta | .004 | .007 | .006 | .008<br>.006 |
| | B.C. | .004 | .007 | .007 | .007 |
| Mortgage Interest | Atlantic | .021 | .029 | .035 | .028 |
| | Quebec | .024 | .031 | .026 | .024 |
| | Ontario | .031 | .045 | .035 | .034 |
| | Man. & Sask. } Alberta | .028 | .047 | .044 | .028<br>.050 |
| | B.C. | .035 | .057 | .048 | .041 |
| Water, Fuel, and Electricity | Atlantic | .068 | .083 | .056 | .076 |
| | Quebec | .039 | .051 | .041 | .046 |
| | Ontario | .041 | .053 | .031 | .045 |
| | Man. & Sask. } Alberta | .044 | .057 | .037 | .054<br>.048 |
| | B.C. | .039 | .048 | .032 | .045 |
| Water | Atlantic | .002 | .003 | .003 | .003 |
| | Quebec | .003 | .003 | .002 | .002 |
| | Ontario | .003 | .004 | .004 | .004 |
| | Man. & Sask. } Alberta | .005 | .006 | .008 | .006<br>.009 |
| | B.C. | .003 | .003 | .002 | .003 |

**Table 2-18** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Fuel Oil and Other Liquid Fuel | Atlantic | .033 | .038 | .029 | .028 |
| | Quebec | .013 | .014 | .011 | .007 |
| | Ontario | .011 | .012 | .007 | .008 |
| | Man. & Sask. } Alberta | .006 | .006 | .001 | .004<br>.001 |
| | B.C. | .007 | .010 | .007 | .004 |
| Piped Gas | Atlantic | .000 | .001 | .000 | .000 |
| | Quebec | .002 | .002 | .002 | .002 |
| | Ontario | .009 | .015 | .015 | .012 |
| | Man. & Sask. } Alberta | .013 | .021 | .021 | .017<br>.017 |
| | B.C. | .009 | .009 | .011 | .013 |
| Other Fuels | Atlantic | .004 | .006 | .002 | .007 |
| | Quebec | .001 | .002 | .001 | .002 |
| | Ontario | .002 | .001 | .001 | .001 |
| | Man. & Sask. } Alberta | .002 | .002 | .001 | .001<br>.001 |
| | B.C. | .001 | .002 | .001 | .002 |
| Electricity | Atlantic | .028 | .035 | .032 | .038 |
| | Quebec | .019 | .031 | .029 | .033 |
| | Ontario | .017 | .021 | .015 | .020 |
| | Man. & Sask. } Alberta | .018 | .022 | .017 | .027<br>.019 |
| | B.C. | .020 | .024 | .022 | .023 |
| Other Accommodation | Atlantic | .004 | .010 | .010 | .008 |
| | Quebec | .007 | .010 | .009 | .010 |
| | Ontario | .008 | .012 | .011 | .013 |
| | Man. & Sask. } Alberta | .006 | .010 | .011 | .011<br>.011 |
| | B.C. | .007 | .010 | .012 | .010 |
| Traveller Accommodation | Atlantic | .. | .006 | .005 | .004 |
| | Quebec | .. | .005 | .006 | .005 |
| | Ontario | .. | .007 | .006 | .007 |
| | Man. & Sask. } Alberta | .. | .008 | .007 | .006<br>.008 |
| | B.C. | .. | .007 | .007 | .004 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

the 1980s) than is true in any of the other regions (although Ontario was as high in 1978). Much of the difference arises from differences in mortgage interest payments, reflecting the rapid rise in housing prices in the late 1970s and early 1980s in British Columbia. No doubt there will be further changes evident when the next family expenditure survey is released, as well, given the inflation in housing prices in the Toronto market, for instance.

As well as these relatively high proportions, it is equally noteworthy that Atlantic Canada has consistently the lowest proportion of total spending or before-tax income allocated to shelter expenditure. With the same total spending or income, households in that area are required to spend less on shelter.

Maintenance and repairs appear to take a greater proportion of the total expenditures in the Atlantic provinces than in other provinces, again consistent with the age of the stock of housing. Rent is much lower as a proportion of total household spending in the Atlantic Provinces. There are lower property taxes as a proportion of total household spending in the Atlantic Provinces, which may be reflective of a lesser reliance on such taxes or may be reflective of a lower property value, given market value assessment.

**SIZE OF MUNICIPALITY:**

In Tables 2-19 and 2-20, expenditures on shelter are broken down as a proportion of income before taxes and of total expenditures respectively according to the size of the area of residence. In 1978 and 1982, it was

more expensive to live in those cities of from 30,000 to 99,999 people as a proportion of before-tax income but when adjusted to have total expenditures as the base, it was more expensive proportionately to live in the largest urban areas (note, 1984 is not reported because that survey was for only urban municipalities of over 100,000 in size).

By 1986, for the proportion of before-tax income and also for the proportion of total expenditure, there is a direct relationship between the proportion allocated to shelter and the size of the urban area. However, it would be expected a priori that households in rural areas would allocate a lower proportion of total spending or income to shelter, and this is substantiated in Tables 2-19 and 2-20. The rural farm category seems to have the lowest proportions while the urban non-farm people allocate less to housing than urban dwellers but more than rural farm families.

**INCOME QUINTILES:**

Tables 2-22 and 2-23 outline the results for spending on housing and housing-related items as a percentage of before-tax income and also as a percentage of total expenditures respectively. Table 2-21 displays the absolute dollar expenditures. In Table 2-21, income quintile does have a significant effect on the proportion of total expenditures being allocated to shelter and this is most pronounced for those family units spending on rented living quarters. For all quintiles, the proportion of total spending being allocated to housing rose after 1978, reaching a peak in 1984 (except for the highest quintile that peaked in 1982) and then declined in 1986. For the highest income quintile, the reduction by 1986 was to below the proportion spent in 1978.

TABLE 2-19

PROPORTION OF INCOME BEFORE TAXES SPENT ON HOUSING AND HOUSING RELATED ITEMS BY SIZE OF MUNICIPALITY

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | Urban > 100000 | .202 | .207 | a | .265 |
| | Urban 30000 - 99999 | .226 | .216 | | .227 |
| | Urban < 30000 | .185 | .202 | | .199 |
| | Rural Farm | .171 | .174 | | .153 |
| | Rural Non-Farm | | | | .174 |
| Principal Accommodation | Urban > 100000 | .. | .201 | | |
| | Urban 30000 - 99999 | .. | .208 | | |
| | Urban < 30000 | .. | .195 | | |
| | Rural Farm | .. | .166 | | |
| | Rural Non-Farm | | | | |
| Rented Living Quarters | Urban > 100000 | .090 | .095 | | .144 |
| | Urban 30000 - 99999 | .098 | .084 | | .105 |
| | Urban < 30000 | .049 | .070 | | .078 |
| | Rural Farm | .021 | .022 | | .004 |
| | Rural Non-Farm | | | | .031 |
| Rent | Urban > 100000 | .. | .092 | | .139 |
| | Urban 30000 - 99999 | .. | .082 | | .102 |
| | Urban < 30000 | .. | .068 | | .076 |
| | Rural Farm | .. | .020 | | .003 |
| | Rural Non-Farm | .. | | | .030 |
| Owned Living Quarters | Urban > 100000 | .070 | .071 | | .077 |
| | Urban 30000 - 99999 | .075 | .076 | | .071 |
| | Urban < 30000 | .075 | .072 | | .061 |
| | Rural Farm | .081 | .085 | | .075 |
| | Rural Non-Farm | | | | .078 |
| Maintenance, Repairs and Replacements | Urban > 100000 | .014 | .009 | | |
| | Urban 30000 - 99999 | .021 | .011 | | |
| | Urban < 30000 | .019 | .013 | | |
| | Rural Farm | .023 | .016 | | |
| | Rural Non-Farm | | | | |
| Contract and Labour Costs | Urban > 100000 | .. | .. | | .010 |
| | Urban 30000 - 99999 | .. | .. | | .007 |
| | Urban < 30000 | .. | .. | | .007 |
| | Rural Farm | .. | .. | | .011 |
| | Rural Non-Farm | .. | .. | | .008 |

**Table 2-19** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Materials | Urban > 100000 | .. | .. | | .003 |
| | Urban 30000 - 99999 | .. | .. | | .003 |
| | Urban < 30000 | .. | .. | | .004 |
| | Rural Farm | .. | .. | | .006 |
| | Rural Non-Farm | .. | .. | | .006 |
| Property Taxes | Urban > 100000 | .021 | .020 | | .021 |
| | Urban 30000 - 99999 | .019 | .022 | | .019 |
| | Urban < 30000 | .019 | .021 | | .018 |
| | Rural Farm | .018 | .020 | | .025 |
| | Rural Non-Farm | | | | .020 |
| Homeowner's Insurance Premiums | Urban > 100000 | .003 | .005 | | .005 |
| | Urban 30000 - 99999 | .004 | .006 | | .005 |
| | Urban < 30000 | .004 | .006 | | .006 |
| | Rural Farm | .006 | .009 | | .012 |
| | Rural Non-Farm | | | | .009 |
| Mortgage Interest | Urban > 100000 | .028 | .032 | | .030 |
| | Urban 30000 - 99999 | .030 | .030 | | .027 |
| | Urban < 30000 | .028 | .027 | | .021 |
| | Rural Farm | .030 | .034 | | .020 |
| | Rural Non-Farm | | | | .028 |
| Water, Fuel, and Electricity | Urban > 100000 | .034 | .035 | | .037 |
| | Urban 30000 - 99999 | .043 | .049 | | .044 |
| | Urban < 30000 | .054 | .052 | | .051 |
| | Rural Farm | .064 | .060 | | .060 |
| | Rural Non-Farm | | | | .058 |
| Water | Urban > 100000 | .003 | .003 | | .003 |
| | Urban 30000 - 99999 | .004 | .003 | | .004 |
| | Urban < 30000 | .005 | .005 | | .005 |
| | Rural Farm | .002 | .002 | | .002 |
| | Rural Non-Farm | | | | .003 |
| Fuel Oil and Other Liquid Fuel | Urban > 100000 | .008 | .008 | | .005 |
| | Urban 30000 - 99999 | .012 | .013 | | .005 |
| | Urban < 30000 | .015 | .013 | | .009 |
| | Rural Farm | .023 | .018 | | .016 |
| | Rural Non-Farm | | | | .012 |
| Piped Gas | Urban > 100000 | .007 | .009 | | .009 |
| | Urban 30000 - 99999 | .006 | .009 | | .009 |
| | Urban < 30000 | .009 | .010 | | .008 |
| | Rural Farm | .003 | .005 | | .005 |
| | Rural Non-Farm | | | | .003 |

**Table 2-19** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Other Fuels | Urban > 100000 | .001 | .001 | | .001 |
| | Urban 30000 - 99999 | .001 | .001 | | .001 |
| | Urban < 30000 | .002 | .002 | | .002 |
| | Rural Farm | .005 | .006 | | .003 |
| | Rural Non-Farm | | | | .006 |
| Electricity | Urban > 100000 | .014 | .016 | | .020 |
| | Urban 30000 - 99999 | .020 | .022 | | .025 |
| | Urban < 30000 | .024 | .023 | | .027 |
| | Rural Farm | .031 | .030 | | .034 |
| | Rural Non-Farm | | | | .033 |
| Other Accommodation | Urban > 100000 | .008 | .008 | | .008 |
| | Urban 30000 - 99999 | .010 | .008 | | .008 |
| | Urban < 30000 | .006 | .008 | | .009 |
| | Rural Farm | .006 | .008 | | .013 |
| | Rural Non-Farm | | | | .007 |
| Traveller Accommodation | Urban > 100000 | .. | .005 | | .005 |
| | Urban 30000 - 99999 | .. | .004 | | .004 |
| | Urban < 30000 | .. | .005 | | .005 |
| | Rural Farm | .. | .005 | | .006 |
| | Rural Non-Farm | .. | | | .004 |

Notes: .. signifies that data are unavailable in the survey for the specific year under consideration.
[a] refers to the fact that in 1984, the survey was for only municipalities of 100,000 or more in size.

## TABLE 2-20

### PROPORTION OF TOTAL EXPENDITURE SPENT ON HOUSING AND HOUSING RELATED ITEMS BY SIZE OF MUNICIPALITY

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | Urban > 100000 | .193 | .263 | a | .. |
| | Urban 30000 - 99999 | .187 | .257 | | .. |
| | Urban < 30000 | .179 | .249 | | .. |
| | Rural Farm | .163 | .213 | | .. |
| | Rural Non-Farm | | | | .. |
| Principal Accommodation | Urban > 100000 | .. | .252 | | .. |
| | Urban 30000 - 99999 | .. | .246 | | .. |
| | Urban < 30000 | .. | .238 | | .. |
| | Rural Farm | .. | .203 | | .. |
| | Rural Non-Farm | .. | | | .. |
| Rented Living Quarters | Urban > 100000 | .082 | .108 | | .. |
| | Urban 30000 - 99999 | .068 | .094 | | .. |
| | Urban < 30000 | .046 | .083 | | .. |
| | Rural Farm | .019 | .025 | | .. |
| | Rural Non-Farm | | | | .. |
| Rent | Urban > 100000 | .. | .104 | | .116 |
| | Urban 30000 - 99999 | .. | .092 | | .103 |
| | Urban < 30000 | .. | .081 | | .087 |
| | Rural Farm | .. | .023 | | .003 |
| | Rural Non-Farm | .. | | | .033 |
| Owned Living Quarters | Urban > 100000 | .070 | .092 | | .086 |
| | Urban 30000 - 99999 | .072 | .082 | | .086 |
| | Urban < 30000 | .072 | .068 | | .077 |
| | Rural Farm | .076 | .020 | | .086 |
| | Rural Non-Farm | | | | .092 |
| Maintenance, Repairs and Replacements | Urban > 100000 | .013 | .012 | | .. |
| | Urban 30000 - 99999 | .018 | .014 | | .. |
| | Urban < 30000 | .018 | .015 | | .. |
| | Rural Farm | .021 | .019 | | .. |
| | Rural Non-Farm | | | | .. |

**Table 2-20** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Contract and Labour Costs | Urban > 100000 | .. | .. | | .008 |
| | Urban 30000 - 99999 | .. | .. | | .009 |
| | Urban < 30000 | .. | .. | | .009 |
| | Rural Farm | .. | .. | | .011 |
| | Rural Non-Farm | .. | .. | | .009 |
| Materials | Urban > 100000 | .. | .. | | .004 |
| | Urban 30000 - 99999 | .. | .. | | .004 |
| | Urban < 30000 | .. | .. | | .005 |
| | Rural Farm | .. | .. | | .007 |
| | Rural Non-Farm | .. | .. | | .008 |
| Property Taxes | Urban > 100000 | .021 | .029 | | .026 |
| | Urban 30000 - 99999 | .019 | .028 | | .024 |
| | Urban < 30000 | .020 | .026 | | .023 |
| | Rural Farm | .018 | .025 | | .030 |
| | Rural Non-Farm | | | | .025 |
| Homeowner's Insurance Premiums | Urban > 100000 | .003 | .007 | | .006 |
| | Urban 30000 - 99999 | .004 | .007 | | .007 |
| | Urban < 30000 | .004 | .008 | | .007 |
| | Rural Farm | .006 | .012 | | .016 |
| | Rural Non-Farm | | | | .011 |
| Mortgage Interest | Urban > 100000 | .029 | .044 | | .034 |
| | Urban 30000 - 99999 | .029 | .039 | | .033 |
| | Urban < 30000 | .026 | .036 | | .02 |
| | Rural Farm | .028 | .043 | | .020 |
| | Rural Non-Farm | | | | .034 |
| Water, Fuel, and Electricity | Urban > 100000 | .033 | .047 | | .040 |
| | Urban 30000 - 99999 | .041 | .058 | | .052 |
| | Urban < 30000 | .054 | .064 | | .062 |
| | Rural Farm | .063 | .072 | | .069 |
| | Rural Non-Farm | | | | .068 |
| Water | Urban > 100000 | .003 | .004 | | .003 |
| | Urban 30000 - 99999 | .003 | .004 | | .005 |
| | Urban < 30000 | .005 | .006 | | .007 |
| | Rural Farm | .002 | .002 | | .002 |
| | Rural Non-Farm | | | | .004 |

**Table 2-20** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Fuel Oil and Other Liquid Fuel | Urban > 100000 | .008 | .010 | | .006 |
| | Urban 30000 - 99999 | .012 | .015 | | .007 |
| | Urban < 30000 | .015 | .015 | | .011 |
| | Rural Farm | .022 | .021 | | .018 |
| | Rural Non-Farm | | | | .014 |
| Piped Gas | Urban > 100000 | .007 | .012 | | .010 |
| | Urban 30000 - 99999 | .006 | .012 | | .010 |
| | Urban < 30000 | .009 | .012 | | .010 |
| | Rural Farm | .003 | .005 | | .006 |
| | Rural Non-Farm | | | | .004 |
| Other Fuels | Urban > 100000 | .001 | .001 | | .001 |
| | Urban 30000 - 99999 | .001 | .002 | | .001 |
| | Urban < 30000 | .002 | .002 | | .003 |
| | Rural Farm | .005 | .007 | | .004 |
| | Rural Non-Farm | | | | .007 |
| Electricity | Urban > 100000 | .014 | .021 | | .020 |
| | Urban 30000 - 99999 | .018 | .026 | | .028 |
| | Urban < 30000 | .023 | .029 | | .032 |
| | Rural Farm | .031 | .037 | | .040 |
| | Rural Non-Farm | | | | .040 |
| Other Accommodation | Urban > 100000 | .008 | .011 | | .011 |
| | Urban 30000 - 99999 | .008 | .010 | | .011 |
| | Urban < 30000 | .006 | .011 | | .012 |
| | Rural Farm | .005 | .010 | | .021 |
| | Rural Non-Farm | | | | .010 |
| Traveller Accommodation | Urban > 100000 | | .007 | | .006 |
| | Urban 30000 - 99999 | | .006 | | .006 |
| | Urban < 30000 | | .006 | | .006 |
| | Rural Farm | | .006 | | .007 |
| | Rural Non-Farm | | | | .004 |

Notes: .. signifies that data are unavailable in the survey for the specific year under consideration.

[a] refers to the fact that in 1984, the survey was for only municipalities of 100,000 or more in size.

## TABLE 2-21

## ABSOLUTE EXPENDITURE ON SHELTER AND HOUSING RELATED ITEMS BY INCOME QUINTILE

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| **Shelter** | | | | |
| Lowest Quintile | 1733.94 | 2593.85 | 3226.80 | 3425.35 |
| Second Quintile | 2492.52 | 3718.71 | 4373.49 | 4626.05 |
| Third Quintile | 3181.37 | 4769.05 | 5554.79 | 5795.17 |
| Fourth Quintile | 3750.24 | 5801.71 | 6485.01 | 6977.93 |
| Highest Quintile | 4652.78 | 7413.07 | 8197.68 | 8683.91 |
| **Principal Accommodation** | | | | |
| Lowest Quintile | .. | 2550.88 | 3187.17 | 3369.22 |
| Second Quintile | .. | 3586.74 | 4248.24 | 4436.83 |
| Third Quintile | .. | 4538.97 | 5327.50 | 5516.05 |
| Fourth Quintile | .. | 5446.14 | 6120.93 | 6524.06 |
| Highest Quintile | .. | 6701.26 | 7424.64 | 7675.05 |
| **Rental Quarters** | | | | |
| Lowest Quintile | 837.07 | 1331.46 | 2267.94 | 2018.58 |
| Second Quintile | 1075.20 | 1607.19 | 2402.74 | 2224.16 |
| Third Quintile | 861.92 | 1381.94 | 2259.08 | 1839.88 |
| Fourth Quintile | 717.55 | 1034.67 | 1648.47 | 1320.39 |
| Highest Quintile | 528.43 | 767.72 | 1025.47 | 938.17 |
| **Rent** | | | | |
| Lowest Quintile | .. | 1293.10 | 2224.57 | 1979.57 |
| Second Quintile | .. | 1555.91 | 2343.67 | 2164.56 |
| Third Quintile | .. | 1328.10 | 2179.32 | 1795.83 |
| Fourth Quintile | .. | 989.37 | 1579.17 | 1271.84 |
| Highest Quintile | .. | 714.31 | 974.72 | 904.09 |
| **Owned Living Quarters** | | | | |
| Lowest Quintile | 413.97 | 591.45 | 446.68 | 662.73 |
| Second Quintile | 808.10 | 1200.25 | 1092.92 | 1333.55 |
| Third Quintile | 1543.22 | 2193.44 | 2144.97 | 2570.88 |
| Fourth Quintile | 2103.08 | 3267.01 | 3301.55 | 3876.31 |
| Highest Quintile | 2812.56 | 4557.58 | 4927.26 | 5068.97 |

**Table 2-21** (continued)

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| **Property Tax** | | | | |
| Lowest Quintile | .. | 231.38 | 190.93 | 258.38 |
| Second Quintile | .. | 342.94 | 363.73 | 387.32 |
| Third Quintile | .. | 511.11 | 541.89 | 608.26 |
| Fourth Quintile | .. | 726.94 | 792.22 | 895.56 |
| Highest Quintile | .. | 1011.83 | 1196.51 | 1367.18 |
| **Mortgage Interest** | | | | |
| Lowest Quintile | .. | 107.13 | 59.58 | 102.55 |
| Second Quintile | .. | 463.91 | 375.38 | 443.17 |
| Third Quintile | .. | 1118.25 | 1009.63 | 1179.42 |
| Fourth Quintile | .. | 1783.12 | 1603.01 | 1896.73 |
| Highest Quintile | .. | 2407.57 | 2316.33 | 2225.57 |
| **Repairs, Maintenance** | | | | |
| Lowest Quintile | .. | 140.52 | 93.41 | 141.56 |
| Second Quintile | .. | 200.95 | 192.89 | 232.61 |
| Third Quintile | .. | 253.97 | 294.79 | 353.86 |
| Fourth Quintile | .. | 389.93 | 396.01 | 461.65 |
| Highest Quintile | .. | 568.84 | 788.89 | 790.37 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

TABLE 2.22

EXPENDITURES ON HOUSING AS A PROPORTION OF
BEFORE-TAX INCOME BROKEN DOWN BY INCOME QUINTILE

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Shelter | | | | |
| Lowest Quintile | .317 | .324 | .486 | .476 |
| Second Quintile | .193 | .204 | .229 | .214 |
| Third Quintile | .168 | .172 | .187 | .172 |
| Fourth Quintile | .146 | .152 | .157 | .147 |
| Highest Quintile | .119 | .126 | .124 | .115 |
| Principal Accommodation | | | | |
| Lowest Quintile | .. | .320 | .481 | .471 |
| Second Quintile | .. | .196 | .223 | .206 |
| Third Quintile | .. | .163 | .179 | .164 |
| Fourth Quintile | .. | .142 | .148 | .138 |
| Highest Quintile | .. | .115 | .113 | .103 |
| Rental Quarters | | | | |
| Lowest Quintile | .160 | .176 | .362 | .306 |
| Second Quintile | .084 | .089 | .128 | .104 |
| Third Quintile | .046 | .050 | .078 | .055 |
| Fourth Quintile | .028 | .028 | .041 | .028 |
| Highest Quintile | .014 | .014 | .016 | .013 |
| Rent | | | | |
| Lowest Quintile | .. | .171 | .355 | .298 |
| Second Quintile | .. | .086 | .125 | .102 |
| Third Quintile | .. | .048 | .075 | .054 |
| Fourth Quintile | .. | .026 | .039 | .027 |
| Highest Quintile | .. | .013 | .015 | .012 |
| Owned Living Quarters | | | | |
| Lowest Quintile | .071 | .067 | .058 | .085 |
| Second Quintile | .062 | .065 | .056 | .061 |
| Third Quintile | .081 | .078 | .071 | .075 |
| Fourth Quintile | .081 | .085 | .079 | .082 |
| Highest Quintile | .072 | .078 | .075 | .069 |

**Table 2-22** (continued)

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| **Property Tax** | | | | |
| Lowest Quintile | .. | .028 | .022 | .028 |
| Second Quintile | .. | .019 | .019 | .018 |
| Third Quintile | .. | .018 | .018 | .018 |
| Fourth Quintile | .. | .019 | .019 | .019 |
| Highest Quintile | .. | .017 | .018 | .018 |
| **Mortgage Interest** | | | | |
| Lowest Quintile | .. | .011 | .007 | .019 |
| Second Quintile | .. | .025 | .019 | .020 |
| Third Quintile | .. | .040 | .033 | .034 |
| Fourth Quintile | .. | .046 | .038 | .040 |
| Highest Quintile | .. | .041 | .036 | .030 |
| **Repairs, Maintenance** | | | | |
| Lowest Quintile | .. | .015 | .014 | .021 |
| Second Quintile | .. | .011 | .010 | .011 |
| Third Quintile | .. | .009 | .010 | .010 |
| Fourth Quintile | .. | .010 | .010 | .010 |
| Highest Quintile | .. | .010 | .012 | .010 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

TABLE 2-23

EXPENDITURES ON HOUSING AS A PROPORTION OF
TOTAL SPENDING BROKEN DOWN BY INCOME QUINTILE

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Shelter | | | | |
| Lowest Quintile | .264 | .292 | .332 | .296 |
| Second Quintile | .183 | .206 | .222 | .201 |
| Third Quintile | .168 | .180 | .188 | .169 |
| Fourth Quintile | .153 | .164 | .165 | .155 |
| Highest Quintile | .133 | .145 | .139 | .127 |
| Accommodation | | | | |
| Lowest Quintile | .. | .288 | .329 | .292 |
| Second Quintile | .. | .199 | .216 | .194 |
| Third Quintile | .. | .171 | .181 | .161 |
| Fourth Quintile | .. | .154 | .156 | .145 |
| Highest Quintile | .. | .132 | .127 | .114 |
| Rental Quarters | | | | |
| Lowest Quintile | .126 | .157 | .238 | .184 |
| Second Quintile | .080 | .088 | .122 | .099 |
| Third Quintile | .046 | .053 | .078 | .055 |
| Fourth Quintile | .030 | .030 | .043 | .030 |
| Highest Quintile | .016 | .016 | .018 | .014 |
| Rent | | | | |
| Lowest Quintile | .. | .152 | .234 | .181 |
| Second Quintile | .. | .085 | .119 | .096 |
| Third Quintile | .. | .051 | .075 | .053 |
| Fourth Quintile | .. | .028 | .042 | .029 |
| Highest Quintile | .. | .015 | .017 | .013 |
| Owned Living Quarters | | | | |
| Lowest Quintile | .060 | .059 | .042 | .049 |
| Second Quintile | .057 | .065 | .055 | .055 |
| Third Quintile | .080 | .081 | .071 | .073 |
| Fourth Quintile | .084 | .091 | .083 | .085 |
| Highest Quintile | .080 | .088 | .083 | .075 |

**Table 2-23** (continued)

| | | | | |
|---|---|---|---|---|
| **Property Tax** | | | | |
| Lowest Quintile | .. | .026 | .019 | .022 |
| Second Quintile | .. | .020 | .020 | .018 |
| Third Quintile | .. | .020 | .019 | .018 |
| Fourth Quintile | .. | .021 | .021 | .020 |
| Highest Quintile | .. | .020 | .021 | .020 |
| **Mortgage Interest** | | | | |
| Lowest Quintile | .. | .008 | .005 | .006 |
| Second Quintile | .. | .023 | .017 | .017 |
| Third Quintile | .. | .040 | .032 | .033 |
| Fourth Quintile | .. | .049 | .039 | .041 |
| Highest Quintile | .. | .046 | .039 | .033 |
| **Repairs, Maintenance** | | | | |
| Lowest Quintile | .. | .011 | .009 | .010 |
| Second Quintile | .. | .014 | .010 | .010 |
| Third Quintile | .. | .010 | .010 | .010 |
| Fourth Quintile | .. | .011 | .010 | .010 |
| Highest Quintile | .. | .011 | .013 | .011 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

For each year the quintile values have been calculated follows:

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Lowest | 0-9,936 | 0-13,548 | 0-13,945 | 0-16,086 |
| Second | 9,936-16,000 | 13,548-23,270 | 13,945-24,852 | 16,086-27,740 |
| Third | 16,000-22,272 | 23,270-32,717 | 24,852-35,356 | 27,740-40,323 |
| Fourth | 22,272-30,000 | 32,717-45,492 | 35,356-49,375 | 40,323-56,347 |
| Highest | 30,000+ | 45,492+ | 49,375+ | 56,347+ |

**LEVEL OF EDUCATION:**

Very much related to income is the education of the household head. Tables 2-24 and 2-25 display the relationship to before-tax income and total spending respectively.

There is less pattern to spending on rental quarters than there is on owned living quarters; for the latter spending increases generally as a proportion of both income and spending as education level is at the University level.

Shelter expenditures on the whole are highest, as a proportion of income or spending, for those with the lowest levels of education, again suggesting that the problem is not housing prices but rather income level.

TABLE 2-24

PROPORTION OF BEFORE-TAX INCOME SPENT ON HOUSING AND HOUSING RELATED ITEMS BY EDUCATON LEVEL

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| **Shelter** | | | | |
| Elementary | .202 | .218 | .252 | .232 |
| Some Secondary | .198 | .203 | .260 | .223 |
| Some Post-Secondary | .191 | .199 | .234 | .218 |
| Diploma or Certificate | .200 | .191 | .202 | .336 |
| University Degree | .170 | .178 | .175 | .225 |
| **Principal Accommodation** | | | | |
| Elementary | .. | .212 | .247 | .226 |
| Some Secondary | .. | .195 | .254 | .215 |
| Some Post-Secondary | .. | .190 | .225 | .203 |
| Diploma or Certificate | .. | .181 | .192 | .327 |
| University Degree | .. | .166 | .163 | .210 |
| **Rental Quarters** | | | | |
| Elementary | .067 | .081 | .130 | .101 |
| Some Secondary | .080 | .078 | .149 | .094 |
| Some Post-Secondary | .070 | .079 | .131 | .098 |
| Diploma or Certificate | .085 | .073 | .096 | .206 |
| University Degree | .058 | .02 | .061 | .109 |
| **Rent** | | | | |
| Elementary | .. | .078 | .127 | .099 |
| Some Secondary | .. | .076 | .145 | .092 |
| Some Post-Secondary | .. | .077 | .128 | .095 |
| Diploma or Certificate | .. | .071 | .094 | .196 |
| University Degree | .. | .060 | .059 | .108 |
| **Owned Living Quarters** | | | | |
| Elementary | .073 | .068 | .066 | .066 |
| Some Secondary | .070 | .075 | .066 | .080 |
| Some Post-Secondary | .081 | .076 | .064 | .073 |
| Diploma or Certificate | .078 | .075 | .068 | .073 |
| University Degree | .077 | .078 | .079 | .075 |

**Table 2-24** (continued)

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| **Property Tax** | | | | |
| Elementary | .. | .0262 | .025 | .025 |
| Some Secondary | .. | .020 | .018 | .021 |
| Some Post-Secondary | .. | .018 | .017 | .021 |
| Diploma or Certificate | .. | .017 | .018 | .018 |
| University Degree | .. | .017 | .017 | .019 |
| **Mortgage Interest** | | | | |
| Elementary | .. | .017 | .150 | .013 |
| Some Secondary | .. | .033 | .027 | .032 |
| Some Post-Secondary | .. | .040 | .030 | .031 |
| Diploma or Certificate | .. | .037 | .026 | .032 |
| University Degree | .. | .044 | .040 | .035 |
| **Repairs, Maintenance** | | | | |
| Elementary | .. | .013 | .015 | .015 |
| Some Secondary | .. | .012 | .009 | .015 |
| Some Post-Secondary | .. | .009 | .008 | .008 |
| Diploma or Certificate | .. | .009 | .013 | .009 |
| University Degree | .. | .009 | .011 | .009 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

TABLE 2-25

PROPORTION OF TOTAL EXPENDITURES SPENT ON HOUSING AND HOUSING RELATED ITEMS BY EDUCATION LEVEL

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Shelter | | | | |
| Elementary | .194 | .220 | .249 | .222 |
| Some Secondary | .183 | .201 | .208 | .195 |
| Some Post-Secondary | .181 | .196 | .212 | .200 |
| Diploma or Certificate | .189 | .192 | .188 | .182 |
| University Degree | .171 | .181 | .176 | .169 |
| Principal Accommodation | | | | |
| Elementary | .. | .215 | .244 | .217 |
| Some Secondary | .. | .194 | .202 | .188 |
| Some Post-Secondary | .. | .187 | .204 | .191 |
| Diploma or Certificate | .. | .182 | .180 | .172 |
| University Degree | .. | .168 | .164 | .155 |
| Rental Quarters | | | | |
| Elementary | .057 | .079 | .124 | .097 |
| Some Secondary | .069 | .076 | .102 | .086 |
| Some Post-Secondary | .061 | .073 | .114 | .084 |
| Diploma or Certificate | .075 | .071 | .088 | .074 |
| University Degree | .054 | .055 | .056 | .056 |
| Rent | | | | |
| Elementary | .. | .076 | .121 | .095 |
| Some Secondary | .. | .074 | .100 | . 84 |
| Some Post-Secondary | .. | .070 | .111 | .082 |
| Diploma or Certificate | .. | .068 | .086 | .073 |
| University Degree | .. | .054 | .055 | .055 |
| Owned Living Quarters | | | | |
| Elementary | .069 | .069 | .0688 | .062 |
| Some Secondary | .069 | .076 | .064 | .064 |
| Some Post-Secondary | .080 | .079 | .061 | .074 |
| Diploma or Certificate | .078 | .077 | .064 | .069 |
| University Degree | .081 | .086 | .082 | .073 |

**Table 2-25** (continued)

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Property Tax | | | | |
| Elementary | .. | .028 | .027 | .024 |
| Some Secondary | .. | .020 | .019 | .016 |
| Some Post-Secondary | .. | .020 | .016 | .018 |
| Diploma or Certificate | .. | .018 | .018 | .017 |
| University Degree | .. | .019 | .019 | .020 |
| Mortgage Interest | | | | |
| Elementary | .. | .017 | .014 | .012 |
| Some Secondary | .. | .033 | .026 | .025 |
| Some Post-Secondary | .. | .041 | .030 | .034 |
| Diploma or Certificate | .. | .038 | .028 | .031 |
| University Degree | .. | .047 | .041 | .034 |
| Repairs, Maintenance | | | | |
| Elementary | .. | .014 | .016 | .014 |
| Some Secondary | .. | .012 | .009 | .009 |
| Some Post-Secondary | .. | .009 | .007 | .008 |
| Diploma or Certificate | .. | .009 | .009 | .009 |
| University Degree | .. | .010 | .012 | .009 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

# CHAPTER 3

## HOUSEHOLD SPENDING AS IT VARIES BY HOUSING CHARACTERISTICS

Another aspect of household spending is the choice of living quarters, the age and size of the unit, and the financial arrangements related to purchase or rent. These are explored in this Chapter.

### TENURE:

The tenure of the individual family is very important in determining the amount of spending on housing and so we have broken tenure down to look at expenditures on housing and on related items as a percentage of before-tax income and total expenditures. The data are found in Table 3-1 and 3-2. In order to examine more closely the relationship between tenure and spending, Tables 3-3 and 3-4 examine the breakdown between tenure and spending when controlling for age and income quintile, respectively.

In Table 3-1, those renting their housing spend considerably more as a percentage of their total spending than do those who own their own homes without or with a mortgage. That is true for all years examined but becomes more pronounced in the last year covered when all proportions fall. However, the drop is much more significant for homeowners than for tenants. Also, consistently, the amount spent as a proportion of total spending for those who have a mortgage is higher than for those who have no mortgage. Again, as in other tables (Tables 2-1, 2-15, and 2-16) we can note that housing expenditures became a larger percentage of total expenditures in the 1982 survey as compared to the 1978 survey and then slowly decreased through the 1980s.

In absolute expenditures, the highest expenditures tend to be on housing that is owned with a mortgage and on housing in which the family has a mixed experience during the year but owned on December 31. Regular tenants also pay more in absolute dollars than those who own homes without a mortgage.

By age, those over 69 consistently, spend more on shelter regardless of tenure situation. Those who are regular tenants spend more than other tenures in their senior years, whereas those with mortgages spend more than other tenures in their younger years (i.e. under age 29).

By income, those in the lowest income quintile spend a higher proportion of total spending on housing, regardless of tenure. There is a striking 43.7 percent of total spending devoted to housing by those in the lowest quintile with mortgages.

**LIVING QUARTERS:**

Table 3-5 relates the data on spending as a percentage of total expenditures according to the type of living quarters lived in. Table 3-5 demonstrates that apartment dwelling costs more as a percentage of total expenditures than does living in single family housing and that is consistent throughout the four years of the surveys. Of course, it may not be that living in an apartment costs so much as the fact that those who live in apartments may have lower total expenditures, thus increasing the ratio. The latter could also be said for those who live in semi-detached, row housing, or duplexes.

## TABLE 3-1

## EXPENDITURE ON HOUSING AS A PROPORTION OF TOTAL SPENDING BROKEN DOWN BY TENURE

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| **Shelter** | | | | |
| Homeowner Without Mortgage | .160 | .168 | .160 | .148 |
| Homeowner With Mortgage | .186 | .204 | .197 | .189 |
| Tenant: Regular | .208 | .232 | .245 | .240 |
| Tenant: Roomer and Rent Free | .138 | .146 | .180 | .163 |
| Mixed: Owned Dec. 31 | .204 | .234 | .229 | .249 |
| Mixed: Rented Dec. 31 | [a] | .228 | .245 | .264 |
| **Principal Accommodation** | | | | |
| Homeowner Without Mortgage | .. | .158 | .149 | .136 |
| Homeowner With Mortgage | .. | .195 | .190 | .181 |
| Tenant: Regular | .. | .225 | .239 | .234 |
| Tenant: Roomer and Rent Free | .. | .137 | .174 | .153 |
| Mixed: Owned Dec. 31 | .. | .229 | .223 | .238 |
| Mixed: Rented Dec. 31 | [a] | .223 | .240 | .255 |
| **Rental Living Quarters** | | | | |
| Homeowner Without Mortgage | .000 | .001 | .000 | .001 |
| Homeowner With Mortgage | .001 | .001 | .000 | .000 |
| Tenant: Regular | .179 | .200 | .218 | .212 |
| Tenant: Roomer and Rent Free | .107 | .110 | .160 | .134 |
| Mixed: Owned Dec. 31 | .065 | .072 | .068 | .068 |
| Mixed: Rented Dec. 31 | [a] | .089 | .094 | .082 |
| **Rent** | | | | |
| Homeowner Without Mortgage | .. | .001 | .000 | .001 |
| Homeowner With Mortgage | .. | .001 | .000 | .000 |
| Tenant: Regular | .. | .194 | .213 | .207 |
| Tenant: Roomer and Rent Free | .. | .099 | .154 | .130 |
| Mixed: Owned Dec. 31 | .. | .070 | .065 | .067 |
| Mixed: Rented Dec. 31 | [a] | .086 | .086 | .078 |
| **Owned Living Quarters** | | | | |
| Homeowner Without Mortgage | .079 | .084 | .089 | .074 |
| Homeowner With Mortgage | .139 | .153 | .150 | .141 |
| Tenant: Regular | .005 | .000 | .000 | .000 |
| Tenant: Roomer and Rent Free | .000 | .000 | .000 | .000 |
| Mixed: Owned Dec. 31 | .108 | .128 | .130 | .141 |
| Mixed: Rented Dec. 31 | [a] | .098 | .121 | .139 |

**Table 3-1** (continued)

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Property Tax | | | | |
| Homeowner Without Mortgage | .. | .042 | .045 | .039 |
| Homeowner With Mortgage | .. | .028 | .031 | .027 |
| Tenant: Regular | .. | .000 | .000 | .000 |
| Tenant: Roomer and Rent Free | .. | .000 | .000 | .000 |
| Mixed: Owned Dec. 31 | .. | .013 | .016 | .020 |
| Mixed: Rented Dec. 31 | [a] | .020 | .016 | .022 |
| Mortgage Interest | | | | |
| Homeowner Without Mortgage | .. | .002 | .002 | .001 |
| Homeowner With Mortgage | .. | .097 | .089 | .083 |
| Tenant: Regular | .. | .000 | .000 | .000 |
| Tenant: Roomer and Rent Free | .. | .000 | .000 | .000 |
| Mixed: Owned Dec. 31 | .. | .059 | .061 | .064 |
| Mixed: Rented Dec. 31 | [a] | .021 | .024 | .026 |
| Repairs, Maintenance | | | | |
| Homeowner Without Mortgage | .. | .023 | .025 | .020 |
| Homeowner With Mortgage | .. | .013 | .014 | .014 |
| Tenant: Regular | .. | .000 | .000 | .000 |
| Tenant: Roomer and Rent Free | .. | .000 | .000 | .000 |
| Mixed: Owned Dec. 31 | .. | .023 | .017 | .013 |
| Mixed: Rented Dec. 31 | [a] | .004 | .016 | .007 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

[a] In 1978, mixed were considered together, not distinguishing between tenure at the end of the year.

## TABLE 3-2

## ABSOLUTE SPENDING ON HOUSING BY TENURE

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| **Shelter** | | | | |
| Homeowner Without Mortgage | 1962.14 | 3255.63 | 4178.30 | 4115.15 |
| Homeowner With Mortgage | 4391.83 | 6808.59 | 7933.30 | 8150.97 |
| Tenant: Regular | 2703.85 | 3977.39 | 4811.37 | 5074.52 |
| Tenant: Roomer and Rent Free | 1062.67 | 1752.92 | 1761.97 | 1798.63 |
| Mixed: Owned Dec. 31 | 4622.37 | 7015.15 | 9203.59 | 8829.03 |
| Mixed: Rented Dec. 31 | [a] | 6268.78 | 9256.39 | 9124.61 |
| **Principal Accommodation** | | | | |
| Homeowner Without Mortgage | .. | 2937.12 | 3762.83 | 3617.75 |
| Homeowner With Mortgage | .. | 6469.82 | 7540.25 | 7715.38 |
| Tenant: Regular | .. | 3804.35 | 4608.68 | 4877.55 |
| Tenant: Roomer and Rent Free | .. | 1526.63 | 1637.47 | 1593.01 |
| Mixed: Owned Dec. 31 | .. | 6844.97 | 8904.67 | 8536.96 |
| Mixed: Rented Dec. 31 | [a] | 6073.15 | 9030.04 | 8745.96 |
| **Rental Living Quarters** | | | | |
| Homeowner Without Mortgage | .50 | 23.96 | 3.90 | 23.01 |
| Homeowner With Mortgage | 24.12 | 21.05 | 18.67 | 18.71 |
| Tenant: Regular | 2272.71 | 3350.49 | 4197.50 | 4382.84 |
| Tenant: Roomer and Rent Free | 819.51 | 1374.88 | 1379.53 | 1268.49 |
| Mixed: Owned Dec. 31 | 1428.66 | 2106.35 | 2780.19 | 2486.64 |
| Mixed: Rented Dec. 31 | [a] | 2170.68 | 3364.03 | 2626.97 |
| **Rent** | | | | |
| Homeowner Without Mortgage | .. | 23.80 | 3.90 | 22.50 |
| Homeowner With Mortgage | .. | 20.84 | 18.55 | 18.53 |
| Tenant: Regular | .. | 3246.28 | 4073.83 | 4269.30 |
| Tenant: Roomer and Rent Free | .. | 960.96 | 1217.74 | 1177.22 |
| Mixed: Owned Dec. 31 | .. | 2002.17 | 2692.59 | 2415.20 |
| Mixed: Rented Dec. 31 | [a] | 2067.65 | 3110.69 | 2447.39 |
| **Owned Living Quarters** | | | | |
| Homeowner Without Mortgage | 1008.63 | 1660.12 | 2325.58 | 2102.77 |
| Homeowner With Mortgage | 3298.64 | 5119.16 | 6065.86 | 6166.36 |
| Tenant: Regular | 7.74 | 4.87 | .00 | 1.11 |
| Tenant: Roomer and Rent Free | .00 | .00 | .00 | 1.27 |
| Mixed: Owned Dec. 31 | 2507.12 | 4404.68 | 5167.78 | 5064.85 |
| Mixed: Rented Dec. 31 | [a] | 3303.58 | 2393.62 | 2508.94 |

**Table 3-2** (continued)

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Property Tax | | | | |
| Homeowner Without Mortgage | .. | 794.54 | 1124.89 | 1058.45 |
| Homeowner With Mortgage | .. | 926.77 | 1185.41 | 1138.68 |
| Tenant: Regular | .. | .79 | .00 | .07 |
| Tenant: Roomer and Rent Free | .. | .00 | .00 | .88 |
| Mixed: Owned Dec. 31 | .. | 399.73 | 630.47 | 681.02 |
| Mixed: Rented Dec. 31 | [a] | 517.66 | 551.47 | 644.29 |
| Mortgage Interest | | | | |
| Homeowner Without Mortgage | .. | 46.72 | 50.19 | 32.37 |
| Homeowner With Mortgage | .. | 3309.86 | 3625.54 | 3637.24 |
| Tenant: Regular | .. | .65 | .00 | .32 |
| Tenant: Roomer and Rent Free | .. | .00 | .00 | .00 |
| Mixed: Owned Dec. 31 | .. | 1830.61 | 2393.37 | 2202.48 |
| Mixed: Rented Dec. 31 | [a] | 721.28 | 939.46 | 1160.83 |
| Repairs, Maintenance | | | | |
| Homeowner Without Mortgage | .. | 468.15 | 687.42 | 595.92 |
| Homeowner With Mortgage | .. | 447.12 | 607.77 | 629.62 |
| Tenant: Regular | .. | .24 | .00 | .08 |
| Tenant: Roomer and Rent Free | .. | .00 | .00 | .17 |
| Mixed: Owned Dec. 31 | .. | 730.52 | 716.89 | 542.11 |
| Mixed: Rented Dec. 31 | [a] | 120.12 | 621.59 | 227.00 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

[a] In 1978, mixed were considered together, not distinguishing between tenure at the end of the year.

TABLE 3-3

PROPORTION OF TOTAL SPENDING SPENT ON SHELTER
BROKEN DOWN BY TENURE BY AGE

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Homeowner Without Mortgage | <29 | .100 | .117 | .108 | .109 |
| | 30-39 | .109 | .115 | .115 | .105 |
| | 40-49 | .111 | .123 | .114 | .102 |
| | 50-59 | .123 | .137 | .131 | .123 |
| | 60-69 | .177 | .184 | .171 | .166 |
| | >69 | .239 | .251 | .246 | .225 |
| Homeowner With Mortgage | <29 | .209 | .223 | .227 | .209 |
| | 30-39 | .197 | .213 | .208 | .193 |
| | 40-49 | .166 | .186 | .179 | .176 |
| | 50-59 | .161 | .178 | .161 | .177 |
| | 60-69 | .184 | .222 | .201 | .206 |
| | >69 | .299 | .308 | .357 | .251 |
| Tenant: Regular | <29 | .182 | .204 | .215 | .207 |
| | 30-39 | .183 | .202 | .217 | .212 |
| | 40-49 | .191 | .209 | .228 | .223 |
| | 50-59 | .208 | .231 | .262 | .247 |
| | 60-69 | .260 | .281 | .281 | .298 |
| | >69 | .327 | .341 | .357 | .344 |
| Tenant: Roomer or Rent Free | <29 | .114 | .120 | .151 | .128 |
| | 30-39 | .124 | .157 | .208 | .132 |
| | 40-49 | .101 | .125 | .150 | .167 |
| | 50-59 | .120 | .157 | .200 | .192 |
| | 60-69 | .120 | .157 | .200 | .192 |
| | >69 | .226 | .197 | .203 | .207 |
| Mixed: Owned Dec. 31 | <29 | .197 | .223 | .219 | .209 |
| | 30-39 | .211 | .237 | .232 | .328 |
| | 40-49 | .204 | .228 | .231 | .193 |
| | 50-59 | .203 | .259 | .185 | .233 |
| | 60-69 | .207 | .247 | .459 | .188 |
| | >69 | .228 | .381 | .209 | .300 |

**Table 3-3** (continued)

| | | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|---|
| Mixed: | Rented | <29 | [a] | .217 | .224 | .219 |
| Dec. 31 | | 30-39 | | .216 | .317 | .240 |
| | | 40-49 | | .218 | .203 | .242 |
| | | 50-59 | | .232 | .184 | .247 |
| | | 60-69 | | .242 | .281 | .332 |
| | | >69 | | .331 | .279 | .314 |

Note: [a] In 1978, mixed were considered together, not distinguishing between tenure at the end of the year.

**TABLE 3-4**

**PROPORTION OF TOTAL SPENDING SPENT ON SHELTER BROKEN DOWN BY TENURE BY INCOME QUINTILE**

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Homeowner Without Mortgage | Lowest | .240 | .261 | .288 | .239 |
| | Second | .145 | .172 | .191 | .162 |
| | Third | .125 | .133 | .145 | .122 |
| | Fourth | .100 | .114 | .115 | .105 |
| | Highest | .088 | .102 | .101 | .092 |
| Homeowner With Mortgage | Lowest | .266 | .334 | .437 | .290 |
| | Second | .224 | .247 | .262 | .229 |
| | Third | .202 | .216 | .218 | .203 |
| | Fourth | .182 | .190 | .188 | .176 |
| | Highest | .148 | .168 | .160 | .152 |
| Tenant: Regular | Lowest | .300 | .324 | .353 | .341 |
| | Second | .193 | .215 | .232 | .217 |
| | Third | .157 | .174 | .185 | .169 |
| | Fourth | .138 | .154 | .164 | .146 |
| | Highest | .139 | .137 | .136 | .138 |
| Tenant: Roomer or Rent Free | Lowest | .181 | .173 | .231 | .199 |
| | Second | .090 | .106 | .094 | .114 |
| | Third | .073 | .099 | .074 | .080 |
| | Fourth | .083 | .091 | .052 | .066 |
| | Highest | .010 | .125 | .098 | .043 |
| Mixed: Owned Dec. 31 | Lowest | .254 | .373 | .275 | .303 |
| | Second | .250 | .226 | .288 | .254 |
| | Third | .203 | .231 | .238 | .209 |
| | Fourth | .193 | .222 | .232 | .317 |
| | Highest | .174 | .212 | .201 | .171 |

**Table 3-4** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Mixed: Rented Dec. 31 | Lowest | a | .264 | .305 | .360 |
| | Second | | .226 | .247 | .262 |
| | Third | | .239 | .243 | .225 |
| | Fourth | | .200 | .234 | .202 |
| | Highest | | .191 | .151 | .203 |

Note: In 1978, mixed were considered together, not distinguishing between tenure at the end of the year.

In Table 3-6, the proportion of total expenditures devoted to shelter is broken down by living quarters occupied and age. Note the relatively higher proportion devoted to apartments as compared to single detached housing as the head of household ages. At age 30-39, the proportion spent on shelter in 1984 was 19.6 percent if the shelter was single detached but 20.3 percent if an apartment - a difference of 0.7 percent. At 50-59 the difference is 11.6 percent and at over age 69 it is at 11.3 percent.

**LIVING QUARTERS AND TENURE:**

In order to examine those living in apartments who own their dwellings versus those who rent, it is necessary to do a breakdown of dwelling type by tenure. We can observe in Table 3-7 that for those in single detached housing, regular tenants and those who were mixed moving towards renting spent the highest proportion of their total spending dollar on shelter. Similarly, those who owned an apartment, whether with or without a mortgage spent less as a proportion of total expenditures than did those who were regular tenants.

These figures are of interest since the costs associated with the housing would be similar if not lower for renters (it could be argued that condominiums cost more than most rented apartments). The ratio turns out to be higher for the regular tenants than for owners, suggesting that the problem is in the denominator - that is, people with lower permanent incomes (lower total expenditures) tend towards being regular tenants.

**OTHER VARIABLES:**

Here we also explore the number of rooms, the number of bathrooms, and the number of bedrooms as well as when the construction of the living

## TABLE 3-5

## PROPORTION OF TOTAL EXPENDITURES SPENT ON HOUSING AND HOUSING RELATED ITEMS BY LIVING QUARTERS OCCUPIED

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | Single Detached Housing | .185 | .188 | .181 | .171 |
| | Semi Detached/Double Housing | .191 | .204 | .195 | .194 |
| | Row Housing | .197 | .211 | .212 | .214 |
| | Duplex | .184 | .225 | .229 | .207 |
| | Apartment | .211 | .234 | .245 | .244 |
| | Other | .159 | .174 | .216 | .197 |
| Principal Accommodations | Single Detached Housing | .. | .179 | .172 | .161 |
| | Semi Detached/Double Housing | .. | .197 | .187 | .187 |
| | Row Housing | .. | .202 | .207 | .205 |
| | Duplex | .. | .218 | .220 | .201 |
| | Apartment | .. | .227 | .237 | .237 |
| | Other | .. | .169 | .211 | .192 |
| Rented Living Quarters | Single Detached Housing | .013 | .018 | .016 | .017 |
| | Semi Detached/Double Housing | .044 | .068 | .055 | .056 |
| | Row Housing | .114 | .101 | .114 | .126 |
| | Duplex | .091 | .115 | .124 | .118 |
| | Apartment | .172 | .192 | .202 | .204 |
| | Other | .075 | .078 | .155 | .116 |
| Rent | Single Detached Housing | .. | .017 | .016 | .016 |
| | Semi Detached/Double Housing | .. | .065 | .052 | .055 |
| | Row Housing | .. | .099 | .112 | .123 |
| | Duplex | .. | .111 | .121 | .115 |
| | Apartment | .. | .188 | .198 | .200 |
| | Other | .. | .077 | .155 | .116 |
| Owned Living Quarters | Single Detached Housing | .099 | .105 | .108 | .094 |
| | Semi Detached/Double Housing | .097 | .085 | .087 | .088 |
| | Row Housing | .046 | .067 | .061 | .048 |
| | Duplex | .044 | .056 | .056 | .041 |
| | Apartment | .013 | .015 | .016 | .016 |
| | Other | .047 | .049 | .037 | .047 |

**Table 3-5** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Maintenance Repairs And Replacement | Single Detached Housing | .. | .016 | .017 | .015 |
| | Semi Detached/Double Housing | .. | .009 | .009 | .013 |
| | Row Housing | .. | .007 | .003 | .004 |
| | Duplex | .. | .011 | .016 | .007 |
| | Apartment | .. | .002 | .003 | .002 |
| | Other | .. | .007 | | .004 |
| Property Taxes | Single Detached Housing | .. | .031 | .033 | .029 |
| | Semi Detached/Double Housing | .. | .022 | .026 | .024 |
| | Row Housing | .. | .013 | .009 | .009 |
| | Duplex | .. | .018 | .019 | .013 |
| | Apartment | .. | .004 | .005 | .004 |
| | Other | .. | .007 | .006 | .009 |
| Mortgage Interest | Single Detached Housing | .. | .045 | .044 | .036 |
| | Semi Detached/Double Housing | .. | .040 | .042 | .038 |
| | Row Housing | .. | .036 | .035 | .025 |
| | Duplex | .. | .020 | .015 | .015 |
| | Apartment | .. | .004 | .004 | .004 |
| | Other | .. | .016 | .014 | .012 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

**TABLE 3-6**

**PROPORTION OF TOTAL EXPENDITURES SPENT ON SHELTER BROKEN DOWN BY LIVING QUARTERS OCCUPIED AND AGE**

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Single Detached Housing | <29 | .190 | .174 | .209 | .189 |
| | 30-39 | .184 | .162 | .196 | .182 |
| | 40-49 | .149 | .159 | .159 | .147 |
| | 50-59 | .138 | .156 | .146 | .148 |
| | 60-69 | .177 | .207 | .178 | .171 |
| | >69 | .245 | .271 | .241 | .224 |
| Semi-Detached or Double Housing | <29 | .202 | .189 | .218 | .209 |
| | 30-39 | .198 | .185 | .192 | .197 |
| | 40-49 | .165 | .171 | .188 | .201 |
| | 50-59 | .152 | .179 | .157 | .143 |
| | 60-69 | .248 | .224 | .140 | .196 |
| | >69 | .239 | .290 | .358 | .228 |
| Row Housing | <29 | .192 | .198 | .210 | .197 |
| | 30-39 | .189 | .203 | .223 | .205 |
| | 40-49 | .180 | .172 | .221 | .200 |
| | 50-59 | .213 | .168 | .185 | .241 |
| | 60-69 | .209 | .212 | .210 | .258 |
| | >69 | .253 | .292 | .156 | .304 |
| Duplex | <29 | .175 | .209 | .259 | .191 |
| | 30-39 | .166 | .199 | .232 | .189 |
| | 40-49 | .184 | .181 | .191 | .189 |
| | 50-59 | .164 | .168 | .180 | .190 |
| | 60-69 | .229 | .199 | .226 | .243 |
| | >69 | .217 | .268 | .286 | .300 |
| Apartment | <29 | .184 | .234 | .208 | .211 |
| | 30-39 | .185 | .221 | .203 | .213 |
| | 40-49 | .181 | .185 | .213 | .221 |
| | 50-59 | .199 | .179 | .252 | .225 |
| | 60-69 | .250 | .230 | .275 | .286 |
| | >69 | .325 | .290 | .354 | .338 |

**Table 3-6** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Other | <29 | .143 | .. | .196 | .152 |
| | 30-39 | .146 | .. | .228 | .176 |
| | 40-49 | .141 | .. | .195 | .184 |
| | 50-59 | .183 | .. | .231 | .217 |
| | 60-69 | .177 | .. | .210 | .235 |
| | >69 | .234 | .. | .243 | .238 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

## TABLE 3-7

### PROPORTION OF TOTAL EXPENDITURE FOR SHELTER BY LIVING QUARTERS OCCUPIED BY TENURE

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| **Single Detached Housing** | | | | |
| Homeowner Without Mortgage | .159 | .165 | .154 | .145 |
| Homeowner With Mortgage | .185 | .202 | .193 | .186 |
| Tenants - Regular | .192 | .221 | .240 | .216 |
| Tenants - Roomer & Rent Free | .136 | .114 | .078 | .090 |
| Mixed - owned Dec 31 | .204 | .240 | .228 | .263 |
| Mixed - rented Dec 31 | | .225 | .267 | .253 |
| **Semi-Detached or Double Housing** | | | | |
| Homeowner Without Mortgage | .163 | .183 | .161 | .152 |
| Homeowner With Mortgage | .200 | .202 | .188 | .197 |
| Tenants - Regular | .199 | .213 | .223 | .240 |
| Tenants - Roomer & Rent Free | .113 | .100 | .085 | .110 |
| Mixed - owned Dec 31 | .207 | .236 | .234 | .221 |
| Mixed - rented Dec 31 | | .233 | | .185 |
| **Row Housing** | | | | |
| Homeowner Without Mortgage | .186 | .178 | .133 | .148 |
| Homeowner With Mortgage | .190 | .213 | .227 | .216 |
| Tenants - Regular | .203 | .215 | .214 | .221 |
| Tenants - Roomer & Rent Free | 0 | .150 | .069 | .024 |
| Mixed - owned Dec 31 | .200 | .216 | .258 | .209 |
| Mixed - rented Dec 31 | | .281 | .284 | .201 |
| **[ plex** | | | | |
| Homeowner Without Mortgage | .176 | .213 | .183 | .174 |
| Homeowner With Mortgage | .177 | .239 | .203 | .206 |
| Tenants - Regular | .193 | .228 | .257 | .218 |
| Tenants - Roomer & Rent Free | .073 | .089 | .124 | .072 |
| Mixed - owned Dec 31 | .217 | .261 | .331 | .197 |
| Mixed - rented Dec 31 | | .233 | .183 | .229 |

**Table 3-7** (continued)

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Apartment | | | | |
| Homeowner Without Mortgage | .161 | .214 | .206 | .207 |
| Homeowner With Mortgage | .197 | .231 | .221 | .198 |
| Tenants - Regular | .215 | .237 | .249 | .249 |
| Tenants - Roomer & Rent Free | .039 | .068 | .072 | .098 |
| Mixed - owned Dec 31 | .220 | .216 | .147 | .184 |
| Mixed - rented Dec 31 | | .238 | .238 | .301 |
| Other | | | | |
| Homeowner Without Mortgage | .137 | .152 | .163 | .154 |
| Homeowner With Mortgage | .167 | .172 | .210 | .179 |
| Tenants - Regular | .188 | .290 | .254 | .237 |
| Tenants - Roomer & Rent Free | .163 | .178 | .230 | .221 |
| Mixed - owned Dec 31 | .145 | .203 | .139 | .193 |
| Mixed - rented Dec 31 | | .063 | | .082 |

quarters occurred. Table 3-8 examines the spending according to the number of bedrooms. It will be noted that as a proportion of total spending, units with a fewer number of bedrooms cost more than those with a large number of bedrooms. Indeed, except for those units with six or more bedrooms in 1978 and 1986, the number of bedrooms had a negative relationship to spending on shelter as a percentage of total spending. This was particularly true for rented living quarters, which is the main cause of the above result. Spending on owned living quarters increased as a proportion of total spending as the number of bedrooms increased, as did property taxes and mortgage interest.

Table 3-9 provides information about spending according to the number of bathrooms. The highest proportion of total spending was on units with one bathroom. For rented living quarters, again, the single bathroom was the type of unit on which the greatest proportion of total spending was spent. This is likely because of the fact that renters have lower total spending and tend to come from the very young and the elderly. Property taxes do rise as a proportion of total spending, the more bathrooms there are in the dwelling place.

Spending by the number of rooms is described in Table 3-10. The greatest amount as a proportion of total expenditures appears to be spent on units with two or three rooms (consistent with what was found in Tables 3-8 and 3-9). These would likely be rather small apartments occupied by young singles or the elderly. It is interesting to note that in 1978, three room units represented the greatest proportion of total spending and that, as time passed, the type of unit which represented the greatest spending shrank to two rooms. For owned living quarters, spending on

## TABLE 3-8

### PROPORTION OF TOTAL SPENDING ON SHELTER AND RELATED EXPENDITURES BY NUMBER OF BEDROOMS

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | 1 | .219 | .247 | .265 | .256 |
| | 2 | .194 | .216 | .222 | .216 |
| | 3 | .175 | .188 | .183 | .177 |
| | 4 | .164 | .177 | .177 | .161 |
| | 5 | .163 | .180 | .196 | .156 |
| | 6 or more | .174 | .171 | .194 | .166 |
| Principal Accomodations | 1 | .. | .240 | .259 | .251 |
| | 2 | .. | .210 | .214 | .208 |
| | 3 | .. | .180 | .175 | .168 |
| | 4 | .. | .166 | .168 | .150 |
| | 5 | .. | .168 | .185 | .146 |
| | 6 or more | .. | .161 | .181 | .153 |
| Rented Living Quarters | 1 | .172 | .196 | .228 | .216 |
| | 2 | .087 | .100 | .124 | .115 |
| | 3 | .029 | .033 | .046 | .036 |
| | 4 | .014 | .018 | .024 | .026 |
| | 5 | .013 | .021 | .020 | .019 |
| | 6 or more | .015 | .022 | .006 | .012 |
| Rent | 1 | .. | .191 | .224 | .212 |
| | 2 | .. | .097 | .120 | .112 |
| | 3 | .. | .031 | .044 | .035 |
| | 4 | .. | .016 | .023 | .021 |
| | 5 | .. | .020 | .020 | .018 |
| | 6 or more | .. | .020 | .006 | .011 |
| Owned Living Quarters | 1 | .017 | .019 | .012 | .015 |
| | 2 | .055 | .063 | .054 | .053 |
| | 3 | .093 | .097 | .088 | .087 |
| | 4 | .094 | .100 | .103 | .086 |
| | 5 | .092 | .096 | .125 | .081 |
| | 6 or more | .101 | .093 | .126 | .097 |
| Maintenance Repairs and Replacements | 1 | .. | .004 | .002 | .002 |
| | 2 | .. | .011 | .013 | .012 |
| | 3 | .. | .013 | .012 | .012 |
| | 4 | .. | .014 | .014 | .013 |
| | 5 | .. | .016 | .017 | .014 |
| | 6 or more | .. | .018 | .018 | .013 |
| Property Taxes | 1 | .. | .005 | .004 | .004 |
| | 2 | .. | .020 | .017 | .017 |
| | 3 | .. | .027 | .027 | .026 |
| | 4 | .. | .028 | .029 | .025 |
| | 5 | .. | .025 | .028 | .026 |
| | 6 or more | .. | .026 | .037 | .028 |
| Mortgage Interest | 1 | .. | .005 | .003 | .004 |
| | 2 | .. | .020 | .015 | .015 |
| | 3 | .. | .044 | .036 | .035 |
| | 4 | .. | .046 | .047 | .035 |
| | 5 | .. | .044 | .066 | .029 |
| | 6 or more | .. | .038 | .054 | .043 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

TABLE 3-9

PROPORTION OF TOTAL SPENDING ON SHELTER AND RELATED EXPENDITURES BY NUMBER OF BATHROOMS

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | 1 | .190 | .210 | .225 | .210 |
| | 2 | .173 | .187 | .180 | .177 |
| | 3 | .174 | .181 | .181 | .164 |
| | 4 or more | .158 | .167 | .178 | .150 |
| Principal Accomodation | 1 | .. | .203 | .218 | .203 |
| | 2 | .. | .177 | .171 | .165 |
| | 3 | .. | .170 | .171 | .150 |
| | 4 or more | .. | .147 | .168 | .134 |
| Rented Living Quarters | 1 | .077 | .096 | .137 | .115 |
| | 2 | .025 | .027 | .032 | .030 |
| | 3 | .009 | .010 | .011 | .013 |
| | 4 or more | .006 | .003 | .009 | .007 |
| Rent | 1 | .. | .093 | .134 | .113 |
| | 2 | .. | .025 | .031 | .029 |
| | 3 | .. | .010 | .011 | .012 |
| | 4 or more | .. | .003 | .009 | .006 |
| Owned Living Quarters | 1 | .062 | .061 | .046 | .049 |
| | 2 | .099 | .107 | .100 | .096 |
| | 3 | .120 | .123 | .124 | .105 |
| | 4 or more | .089 | .107 | .116 | .092 |
| Maintenance Repairs and Replacements | 1 | .. | .010 | .009 | .009 |
| | 2 | .. | .014 | .014 | .013 |
| | 3 | .. | .011 | .015 | .014 |
| | 4 or more | .. | .010 | .013 | .010 |
| Property Taxes | 1 | .. | .018 | .015 | .015 |
| | 2 | .. | .030 | .029 | .027 |
| | 3 | .. | .030 | .030 | .029 |
| | 4 or more | .. | .037 | .033 | .032 |
| Mortgage Interest | 1 | .. | .023 | .016 | .016 |
| | 2 | .. | .050 | .043 | .040 |
| | 3 | .. | .068 | .064 | .047 |
| | 4 or more | .. | .046 | .054 | .067 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

## TABLE 3-10

## PROPORTION OF TOTAL SPENDING ON SHELTER AND RELATED ITEMS BY NUMBER OF ROOMS

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | 1 | .197 | .214 | .240 | .250 |
| | 2 | .201 | .250 | .286 | .269 |
| | 3 | .225 | .250 | .261 | .266 |
| | 4 | .200 | .224 | .242 | .224 |
| | 5 | .183 | .199 | .201 | .197 |
| | 6 | .175 | .188 | .189 | .177 |
| | 7 | .166 | .183 | .185 | .177 |
| | 8 | .174 | .183 | .178 | .167 |
| | 9 | .176 | .184 | .176 | .159 |
| | 10 | .163 | .164 | .156 | .154 |
| | 11 | .168 | .196 | .163 | .156 |
| | 12 | .146 | .187 | .193 | .145 |
| | 13 | .186 | | | |
| | 14 | .294 | | | |
| | 15 | .. | | | |
| | 16 or more | .129 | | | |
| Principal Accomodation | 1 | .. | .210 | .235 | .247 |
| | 2 | .. | .244 | .279 | .264 |
| | 3 | .. | .243 | .256 | .260 |
| | 4 | .. | .218 | .235 | .218 |
| | 5 | .. | .191 | .193 | .189 |
| | 6 | .. | .180 | .182 | .169 |
| | 7 | .. | .172 | .177 | .168 |
| | 8 | .. | .173 | .170 | .155 |
| | 9 | .. | .172 | .165 | .149 |
| | 10 | .. | 151 | .143 | .140 |
| | 11 | .. | .177 | .153 | .141 |
| | 12 or more | .. | .180 | .178 | .132 |
| Rented Living Quarters | 1 | .184 | .204 | .229 | .240 |
| | 2 | .161 | .215 | .265 | .239 |
| | 3 | .180 | .203 | .229 | .228 |
| | 4 | .112 | .131 | .175 | .148 |
| | 5 | .055 | .062 | .089 | .079 |
| | 6 | .026 | .034 | .046 | .041 |
| | 7 | .016 | .020 | .030 | .026 |
| | 8 | .011 | .016 | .018 | .016 |
| | 9 | .013 | .013 | .015 | .012 |
| | 10 | .008 | .010 | .008 | .011 |
| | 11 | .009 | .012 | .000 | .010 |
| | 12 | .003 | .008 | .000 | .012 |
| | 13 | .000 | | | |
| | 14 | .000 | | | |
| | 15 | .. | | | |
| | 16 or more | .000 | | | |

**Table 3-10** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Rent | 1 | .. | .203 | .229 | .239 |
| | 2 | .. | .213 | .261 | .235 |
| | 3 | .. | .197 | .225 | .224 |
| | 4 | .. | .127 | .170 | .144 |
| | 5 | .. | .060 | .085 | .077 |
| | 6 | .. | .032 | .045 | .040 |
| | 7 | .. | .019 | .029 | .025 |
| | 8 | .. | .015 | .017 | .016 |
| | 9 | .. | .012 | .014 | .012 |
| | 10 | .. | .009 | .008 | .011 |
| | 11 | .. | .010 | .000 | .008 |
| | 12 or more | .. | .007 | .000 | .011 |
| Owned Living Quarters | 1 | .001 | .000 | .002 | .003 |
| | 2 | .014 | .009 | .004 | .009 |
| | 3 | .016 | .015 | .009 | .013 |
| | 4 | .041 | .044 | .030 | .035 |
| | 5 | .075 | .081 | .064 | .065 |
| | 6 | .092 | .093 | .091 | .081 |
| | 7 | .094 | .102 | .105 | .097 |
| | 8 | .104 | .110 | .109 | .096 |
| | 9 | .113 | .113 | .110 | .097 |
| | 10 | .101 | .100 | .102 | .090 |
| | 11 | .102 | .120 | .118 | .091 |
| | 12 | .095 | .131 | .139 | .083 |
| | 13 | .143 | | | |
| | 14 | .238 | | | |
| | 15 | | | | |
| | 16 or more | .027 | | | |
| Maintenance Repairs And Replacements | 1 | .. | .000 | .000 | .001 |
| | 2 | .. | .002 | .000 | .002 |
| | 3 | .. | .004 | .001 | .002 |
| | 4 | .. | .009 | .006 | .006 |
| | 5 | .. | .011 | .011 | .010 |
| | 6 | .. | .013 | .016 | .011 |
| | 7 | .. | .016 | .014 | .016 |
| | 8 | .. | .014 | .015 | .013 |
| | 9 | .. | .016 | .014 | .015 |
| | 10 | .. | .017 | .013 | .013 |
| | 11 | .. | .018 | .019 | .009 |
| | 12 or more | .. | .018 | .021 | .011 |

**Table 3-10** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Property Taxes | 1 | .. | .000 | .000 | .001 |
| | 2 | .. | .001 | .001 | .002 |
| | 3 | .. | .004 | .003 | .003 |
| | 4 | .. | .014 | .010 | .011 |
| | 5 | .. | .023 | .021 | .021 |
| | 6 | .. | .027 | .028 | .025 |
| | 7 | .. | .030 | .030 | .027 |
| | 8 | .. | .029 | .031 | .028 |
| | 9 | .. | .032 | .031 | .028 |
| | 10 | .. | .027 | .026 | .028 |
| | 11 | .. | .030 | .032 | .027 |
| | 12 or more | .. | .034 | .032 | .025 |
| Mortgage Interest | 1 | .. | .000 | .002 | |
| | 2 | .. | .004 | .002 | .003 |
| | 3 | .. | .001 | .002 | .003 |
| | 4 | .. | .013 | .007 | .009 |
| | 5 | .. | .033 | .023 | .021 |
| | 6 | .. | .040 | .035 | .032 |
| | 7 | .. | .044 | .046 | .039 |
| | 8 | .. | .055 | .049 | .041 |
| | 9 | .. | .052 | .051 | .040 |
| | 10 | .. | .043 | .052 | .035 |
| | 11 | .. | .062 | .057 | .042 |
| | 12 or more | .. | .064 | .070 | .032 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

shelter represented a larger percentage of total expenditures when the size of the units increased, although the pattern varied depending on the survey year.

Tied into all of this is the year in which the unit was constructed. Table 3-11 outlines spending by period of construction. Almost invariably, the buildings which were most recently constructed represented a larger proportion of total spending, but the oldest units also represented high levels of spending as a proportion of total expenditures (occupancy of older units by the elderly would explain these results since the elderly tend to spend more on shelter as a proportion of total spending since their incomes and their total spending are so low). For owned living quarters, the spending as a proportion of total expenditures rises as the date of construction is later. This is not true for property taxes, and for mortgage interest there is no firm pattern.

**CONCLUSION:**

It has been noted that there are certain dominant features about the relationship between housing expenditures and demographic, geographic, and economic variables, notably the strong relationship between age and housing expenditures. This fits the life cycle hypothesis often written about by economists in that those who spend the most as a percentage of either before-tax income or total expenditures are those who are young and those who are elderly. In some other work by the authors (Marr and McCready, 1989b) it was noted that there was a significant difference between the elderly who were between the ages of 60 and 75 and those over 75 in their patterns of expenditures.

## TABLE 3-11

## PROPORTION OF TOTAL SPENDING ON SHELTER AND RELATED EXPENDITURES BY PERIOD IN WHICH CONSTRUCTED

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Shelter | 1945 or before | .204 | .209 | .219 | .204 |
| | 1946-1960 | .187 | .199 | .203 | .190 |
| | 1961-1970 | .176 | .197 | .201 | .194 |
| | 1971-1975 | .174 | .198 | .205 | .194 |
| | 1976-1980 | .195 | .204 | .216 | .197 |
| | 1981 (or 1981-82)(or 1981-84) | .192 | .223 | .223 | .198 |
| | 1982 (or 1983)(or 1985) | .. | .210 | .238 | .195 |
| | 1984 (or 1986) | .. | | .190 | .213 |
| Principal Accomodations | 1945 or before | .. | .201 | .211 | .195 |
| | 1946-1960 | .. | .191 | .194 | .182 |
| | 1961-1970 | .. | .188 | .194 | .185 |
| | 1971-1975 | .. | .190 | .197 | .186 |
| | 1976-1980 | .. | .197 | .210 | .189 |
| | 1981 (or 1981-82)(or 1981-84) | .. | .218 | .218 | .190 |
| | 1982 (or 1983)(or 1985) | .. | .205 | .233 | .188 |
| | 1984 (or 1986) | .. | | .178 | .207 |
| Rented Living Quarters | 1945 or before | .050 | .071 | .095 | .079 |
| | 1946-1960 | .060 | .060 | .084 | .073 |
| | 1961-1970 | .079 | .094 | .112 | .097 |
| | 1971-1975 | .054 | .077 | .103 | .088 |
| | 1976-1980 | .062 | .066 | .099 | .080 |
| | 1981 (or 1981-82)(or 1981-84) | .115 | .069 | .112 | .062 |
| | 1982 (or 1983)(or 1985) | | .095 | .112 | .062 |
| | 1984 (or 1986) | | | .125 | .075 |
| Rent | 1945 or before | .. | .068 | .092 | .076 |
| | 1946-1960 | .. | .058 | .082 | .071 |
| | 1961-1970 | .. | .091 | .109 | .095 |
| | 1971-1975 | .. | .075 | .101 | .086 |
| | 1976-1980 | .. | .064 | .097 | .079 |
| | 1981 (or 1981-82)(or 1981-84) | .. | .066 | .108 | .085 |
| | 1982 (or 1983)(or 1985) | .. | .094 | .110 | .061 |
| | 1984 (or 1986) | .. | | .123 | .072 |
| Owned Living Quarters | 1945 or before | .115 | .070 | .067 | .063 |
| | 1946-1960 | .089 | .079 | .068 | .065 |
| | 1961-1970 | .059 | .058 | .053 | .056 |
| | 1971-1975 | .067 | .078 | .068 | .066 |
| | 1976-1980 | .066 | .098 | .085 | .079 |
| | 1981 (or 1981-82)(or 1981-84) | .040 | .119 | .078 | .075 |
| | 1982 (or 1983)(or 1985) | .. | .087 | .094 | .094 |
| | 1984 (or 1986) | .. | | .026 | .107 |

**Table 3-11** (continued)

| | | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|---|
| Maintenance Repairs and Replacements | 1945 or before | .. | .015 | .016 | .012 |
| | 1946-1960 | .. | .015 | .014 | .013 |
| | 1961-1970 | .. | .009 | .008 | .011 |
| | 1971-1975 . | .. | .088 | .006 | .009 |
| | 1976-1980 | .. | .005 | .005 | .006 |
| | 1981 (or 1981-82)(or 1981-84) | .. | .011 | .003 | .005 |
| | 1982 (or 1983) (or 1985) | .. | .003 | .007 | .007 |
| | 1984 (or 1986) | .. | | .000 | .011 |
| Property Taxes | 1945 or before | .. | .023 | .021 | .021 |
| | 1946-1960 | .. | .028 | .025 | .023 |
| | 1961-1970 | .. | .019 | .018 | .018 |
| | 1971-1975 | .. | .018 | .017 | .018 |
| | 1976-1980 | .. | .020 | .018 | .019 |
| | 1981 (or 1981-82) (or 1981-84) | .. | .017 | .017 | .017 |
| | 1982 (or 1983)(or 1985) | .. | .011 | .017 | .023 |
| | 1984 (or 1986) | .. | | .005 | .016 |
| Mortgage Interest | 1945 or before | .. | .022 | .021 | .019 |
| | 1946-11960 | .. | .025 | .020 | .019 |
| | 1961-1970 | .. | .023 | .020 | .017 |
| | 1971-1975 | .. | .039 | .032 | .025 |
| | 1976-1980 | .. | .061 | .049 | .040 |
| | 1981 (or 1981-82)(or 1981-84) | .. | .073 | .044 | .040 |
| | 1982 (or 1983) (or 1985) | .. | .035 | .050 | .051 |
| | 1984 (or 1986) | .. | | .011 | .036 |

Note: For 1978 the numbers refer are in the following order:

Between 1976-1978
1971-1975
1961-1970
1946-1960
Before 1946
Not Stated

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

Other demographic variables are also important. It ought to be noted for instance that single-parent families do find themselves spending more as a percentage of before-tax income or as a percentage of total expenditures than other family configurations. Also, unattached individuals living alone spend more but that may relate more to their age than to their absolute levels of spending.

This chapter describes the proportion of total spending and household income allocated to shelter and its components by demographic group in each of the four survey years. To examine the factors underlying income and expenditure allocation, specifically to distinguish between demographic and non-demographic influences, the impact of non-demographic factors must be controlled. The next chapter tries to do this by using regression and probit techniques to hold non-demographic effects constant. The influence on the allocations to shelter of demographic variables can then be studied.

# CHAPTER 4

# MULTIVARIATE ANALYSIS

## INTRODUCTION

The previous sections of this report related various measures of shelter expenditure and of housing characteristics to demographic and other variables one at a time, or at best in a situation where controls are introduced for one other variable besides the two variables under study. The objective of this section is to examine the relationships between shelter expenditure or housing type and demographic variables holding, at the same time, all of the other variables constant. What then happens to these relationships?

## THE VARIABLES

Since the Survey of Family Expenditure for 1984 only contains observations for households living in cities of 100,000 people or more, the data used in this section utilizes only observations from these largest cities; the observations then are for large urban Canadian cities. The explanatory variables are classified into four groups, and their names and corresponding attributes are as follows:

(1) Geographic Location:

(a) Region of Residence:
- Atlantic Provinces
- Quebec
- Ontario
- Prairie Provinces
- British Columbia

(2) Demographic Characteristics of the Household or its Head:

(a) Number of Persons in the Household (a continuous variable)

(b) Sex of the Head:
- Male
- Female

| | | |
|---|---|---|
| (c) | Head's Birthplace: | Canada<br>U.S., U.K., Northern or Western Europe<br>Southern or Eastern Europe<br>Rest of the World |
| (d) | Head's Time of Arrival in Canada if Foreign-Born: | Within Six Years of Arrival (Recent)<br>Between Six and Eighteen Years of Arrival (Mid)<br>Prior to Eighteen Years (Distant) |
| (e) | Head's Marital Status: | Married (or living common-law)<br>Single (Never Married)<br>Other |
| (f) | Ratio of Children to Adults in the Household (a continuous variable) | |
| (g) | Family Composition: | Unattached Individuals<br>Married Couple Only<br>Married Couple Only with Youngest Child under 5<br>Married Couple Only with Youngest Child 5-15<br>Married Couple Only with Youngest Child 16 or Over<br>Married Couple with Other Relatives Only or with Unrelated Persons<br>Lone-Parent Family Only<br>Other Spending Unit |
| (h) | Head's Age: | Less than 30<br>30-39<br>40-49<br>50-59<br>60-69<br>Greater than 69 |
| (i) | Spouse Working, if Present: | Yes<br>No |

(3) Non-Demographic Characteristics of the Household or its Head:

| | | |
|---|---|---|
| (a) | Head's Educational Level: | Less than 9 Years of Elementary Education<br>Some or Completed Secondary Education<br>Some Post-Secondary Education<br>Post-Secondary Certificate or Diploma<br>University Degree<br>Not Stated |
| (b) | Head's Mother Tongue: | English<br>French<br>Other |

(c) Household's Total Expenditure on Consumer Goods and Services (a continuous variable)

(4) Housing Characteristics:

| | | |
|---|---|---|
| (a) | Type of Living Quarters: | Single House<br>Semi-Detached or Double House<br>Row House<br>Duplex<br>Apartment<br>Other (including rooms) |
| (b) | Class of Tenure: | Homeowner without Mortgage<br>Homeowner with Mortgage<br>Tenants - Regular<br>Tenants - Roomers and Rent-Free<br>Mixed Tenure |

The analysis that follows is carried out for four dependent variables:

(1) weighted ordinary least squares regressions to explain the variance of the proportion of total consumption allocated to shelter,

(2) weighted ordinary least squares regressions to explain the variance of the proportion of total household income before taxes allocated to shelter,

(3) probit regressions to explain the probability of being a homeowner versus a tenant, and

(4) weighted ordinary least squares regressions to calculate the elasticity of shelter expenditure with respect to household income before taxes for all households as well as for subgroups of the sample.

Recall that the objective is to examine the separate influence or effect that each of the independent variables has on these variances or this probability holding all else the same. Although our special interest is in the demographic variables, the results for all variables will be noted.

Each of the binary independent variables has to have an omitted attribute in the econometric analysis, and they are: Geographic Location - Ontario; Education - Nine or Less Years of Education; Mother Tongue - English; Sex of Head - Male; Birthplace and Arrival Time - Canadian-Born; Head's Marital Status - Single or Married; Family Composition - Married

Couple Only; Head's Age - 40 to 49; Living Quarters - Single House; Working Status of Spouse - Not Working; Homeowner with Mortgage - All Other Tenure Attributes.

Before proceeding to the results, one point should be kept in mind. The theory of consumer behaviour argues that a major determinant of the proportion of total consumption allocated to shelter is some measure of the household's income. Milton Friedman (1957) argues that consumption is more closely related to the household's permanent or long-term income level than to its actual income in any particular year; this should be especially true of the proportion allocated to shelter. This suggests that the income variable used should be a proxy for permanent income. In a study of household-level consumer spending in the United States, Houthakker and Taylor (1970) found that total household expenditure was a better proxy of permanent income than was actual income. Recent U.S. and Canadian studies of family expenditures, which attempt to relate consumption to demographic factors, use total current expenditure rather than income as the explanatory variable (Ketker and Cho, 1982; Ketker and Ketker, 1987; Marr and McCready, 1989). Therefore, the independent variable used here as a proxy for permanent income is the household's total current expenditure, which is the sum of spending on food, shelter, household operation, household furnishings, clothing, transportation, health care, recreation, reading materials, tobacco-alcohol, miscellaneous goods and services, personal taxes, security, and gifts and contributions.

**PROPORTION OF TOTAL CONSUMPTION ALLOCATED TO SHELTER EXPENDITURE**

As noted earlier in this report, total consumption for a household is made up of its total spending on food, shelter, household operation, house-

hold furnishings, clothing, transportation, health care, personal care, recreation, reading materials, education, tobacco-alcohol, and miscellaneous goods and services. We want to explain variations in the proportion of this total consumption devoted to shelter expenditures in terms of the four groups of independent variables that are described in the introduction to this section.

Because this examines the allocation of total consumption to shelter spending, total consumption, the denominator in the proportion, includes only consumer goods and services over which the household has a decision-making role and are consumed by the household. Total consumption is therefore less than total expenditure, which was defined at the end of the previous section.

Table 4-1 contains the results of the weighted regressions for the four Surveys of Family Expenditure: 1978, 1982, 1984, and 1986. Every attempt is made to use consistent definitions across the four surveys, but because of changes in some of the variables' attributes some categories had to be omitted in certain cases, namely:

(1) for 1978, the "mid" category for time of arrival of the foreign-born, and the "other composition" category for family composition are not differentiated in the data,

(2) for 1982, the "not stated" attribute on head's education is not identified,

(3) for 1986, only married couples with children are identified so it is impossible to break these couples down by age of youngest child.

First, there are some consistencies in the regression results across the four surveys. In other words, some independent variables consistently influenced the proportion of total consumption allocated to shelter expenditure. These consistencies provide clues to how this proportion

**TABLE 4-1**

**PROPORTION OF TOTAL CONSUMPTION ALLOCATED TO SHELTER EXPENDITURE**
**(t-coefficient in brackets)**

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Geographic Location | | | | |
| Atlantic | -.0130<br>(1.93) | -.0082<br>(1.24) | -.0082<br>(1.01) | -.0129<br>(2.03) |
| Quebec | -.0142<br>(3.42) | .0100<br>(2.36) | -.0046<br>(0.95) | -.0047<br>(1.08) |
| Prairies | -.0160<br>(4.05) | .0097<br>(2.56) | .0034<br>(0.79) | -.0032<br>(0.83) |
| British Columbia | .0011<br>(0.25) | .0248<br>(4.87) | .0176<br>(2.96) | -.0021<br>(0.30) |
| Education | | | | |
| Some or Completed Secondary Education | .0103<br>(2.75) | .0119<br>(3.07) | -.0026<br>(0.53) | .0075<br>(1.23) |
| Some Post-Secondary Education | .0190<br>(4.16) | .0175<br>(3.48) | .0081<br>(0.87) | .0064<br>(0.78) |
| Post-Secondary Certificate or Diploma | .0249<br>(4.43) | .0208<br>(4.31) | .0018<br>(0.28) | .0153<br>(2.10) |
| University Degree | .0344<br>(6.83) | .0413<br>(6.67) | .0292<br>(3.64) | .0297<br>(3.61) |
| Not Stated | -.1011<br>(1.89) | — | .0110<br>(0.48) | -.0259<br>(1.22) |
| Mother Tongue | | | | |
| French | -.0108<br>(2.51) | -.0177<br>(4.18) | -.0101<br>(1.98) | -.0119<br>(2.62) |
| Other | .0005<br>(0.09) | .0042<br>(0.88) | -.0160<br>(2.76) | -.0085<br>(1.80) |
| Household Size | -.0105<br>(6.55) | -.0092<br>(5.24) | -.0082<br>(3.69) | -.0125<br>(6.98) |
| Female Head | .0151<br>(3.44) | .0208<br>(6.12) | .0208<br>(4.17) | .0135<br>(4.13) |

**Table 4-1** (continued)

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Birthplace | | | | |
| U.S., Northern or Western Europe | .0141<br>(3.01) | .0059<br>(1.18) | .0111<br>(1.82) | .0068<br>(1.33) |
| Southern or Eastern Europe | -.0009<br>(0.15) | .00003<br>(0.005) | .0149<br>(1.81) | .0127<br>(1.77) |
| Rest of World | .0096<br>(1.52) | .0109<br>(1.34) | .0120<br>(1.24) | .0224<br>(2.99) |
| Time of Arrival | | | | |
| Recent | -.0081<br>(0.73) | -.0157<br>(1.68) | -.0061<br>(0.48) | -.0221<br>(2.89) |
| Mid | — | .0050<br>(0.82) | .0040<br>(0.56) | -.0063<br>(1.06) |
| Divorced, Separated, Widowed | .0089<br>(1.73) | .0183<br>(3.50) | .0222<br>(3.62) | .0156<br>(2.85) |
| Ratio: Children to Adults | .0284<br>(6.47) | .0205<br>(5.01) | .0186<br>(3.00) | .0241<br>(5.31) |
| Family Composition | | | | |
| Unattached Individuals | .0175<br>(3.54) | .0112<br>(1.97) | .0027<br>(0.36) | .0025<br>(0.42) |
| Married Couple Only: Youngest Child under 5 | .0108<br>(1.93) | .0118<br>(2.07) | .0202<br>(1.87) | |
| Married Couple Only: Youngest Child 5-15 | -.0140<br>(2.63) | -.0110<br>(1.95) | -.0096<br>(1.24) | .0049<br>(0.95) |
| Married Couple Only: Youngest Child 16 or Over | -.0073<br>(0.99) | -.0133<br>(2.74) | -.0132<br>(2.02) | |
| Married Couple with Other Relatives or Unrelated Persons | -.0184<br>(3.70) | .0082<br>(1.05) | -.0020<br>(0.22) | .0242<br>(2.89) |
| Lone-Parent Family Only | -.0188<br>(2.26) | -.0379<br>(4.70) | -.0256<br>(2.56) | -.0175<br>(2.11) |
| Other Composition | — | -.0111<br>(1.68) | -.0100<br>(1.27) | -.0017<br>(0.27) |

**Table 4-1** (continued)

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Age | | | | |
| ≤ 29 | -.0023<br>(0.52) | .0034<br>(0.75) | -.0113<br>(2.10) | -.0139<br>(3.13) |
| 30 - 39 | .0108<br>(2.64) | .0098<br>(2.59) | .0027<br>(0.54) | .0016<br>(0.41) |
| 50 - 59 | -.0044<br>(1.08) | -.0043<br>(1.08) | -.0061<br>(1.20) | -.0080<br>(1.98) |
| 60 - 69 | .0090<br>(1.70) | .0055<br>(1.08) | -.0113<br>(1.70) | -.0065<br>(1.10) |
| ≥ 70 | .0319<br>(4.26) | .0429<br>(5.41) | .0209<br>(2.35) | .0234<br>(2.14) |
| Living Quarters | | | | |
| Semi-detached or Double House | .0068<br>(1.13) | .0122<br>(2.35) | .0159<br>(2.52) | .0159<br>(3.08) |
| Row House | .0011<br>(0.18) | .0154<br>(3.07) | .0263<br>(4.04) | .0284<br>(4.88) |
| Duplex | -.0058<br>(1.00) | .0217<br>(3.80) | .0308<br>(2.71) | .0147<br>(2.10) |
| Apartment | .0119<br>(3.17) | .0082<br>(2.31) | .0272<br>(6.13) | .0326<br>(5.90) |
| Other (including rooms) | -.0818<br>(8.73) | -.0910<br>(9.20) | -.0708<br>(5.37) | -.0689<br>(6.70) |
| Homeowner with Mortgage | .0668<br>(20.46) | .0740<br>(24.06) | .0713<br>(18.71) | .0744<br>(23.40) |
| Spouse Working | .0031<br>(1.10) | -.0065<br>(2.06) | .0082<br>(1.60) | -.0039<br>(0.95) |
| Total Expenditure | -.0684<br>(19.57) | -.0666<br>(19.68) | -.0838<br>(7.93) | -.0798<br>(10.22) |
| $\bar{R}^2$ | .326 | .282 | .294 | .293 |
| F | 69.4 | 70.8 | 50.9 | 73.5 |

would change if the explanatory variable should also change. To provide some structure, the consistencies will be listed according to the four groups of explanatory variables described in this section's introduction:

(a) Demographic Characteristics of the Household or its Head:

(1) larger sized households (Household Size) allocate significantly less than smaller households to shelter expenditure; in the jargon of economists, there are economies of scale in housing since a married couple can often live in the same accommodation as a single person, and children can double up in bedrooms that were previously occupied by a single individual;

(2) households headed by females (Female Head) allocate significantly more to shelter expenditure than male-headed households; female-headed households have on average lower income and total consumption levels, but require a certain level of accommodation with a certain minimum expenditure on shelter; female-headed households must reallocate their total consumption away from other consumer goods and services and towards shelter expenditure;

(3) the foreign-born generally allocate more of their total consumption to shelter than the Canadian-born, although the statistical significance varies from survey to survey; in particular, households whose head was born in the "Rest of the World" allocate significantly more to shelter expenditure;

(4) in two of the surveys, the most recent arrivals (for foreign-born heads) allocate less to shelter expenditure than households headed by Canadian-born or other foreign-born who came to Canada earlier; this is unexpected since the recent foreign-born require accommodation upon arrival; but two factors are at work: first they occupy relatively cheaper living quarters upon arrival, and second the birthplace variable is picking up some of this effect;

(5) households headed by a person who is divorced, separated, or widowed allocate more of total consumption to shelter expenditure than other marital statuses; when this is combined with the fact that many in this group are female and older, the divorced-separated-widowed group who are also female and older allocate relatively high proportions of total consumption to shelter and of course less to other goods and services;

(6) as the ratio of children to adults rises (adults are defined in the surveys as persons 16 years and older), the allocation to shelter expenditure also rises;

(7) although in the two most recent surveys married couples only and unattached individuals allocate the same proportion of total consumption to shelter, unattached individuals devoted a significantly higher proportion to shelter in the two earliest surveys; married couples with young children allocate more to shelter expenditure than married couples only, but the opposite is the case for couples with older children; households headed by a lone-parent allocate less of total consumption to shelter expenditure than any other family composition category;

(8) the relationship between the head's age and the allocation to shelter expenditure is cubic: households with heads in their 20s allocate less to shelter than households with heads in their 30s or 40s, the allocation is lower again for households with heads in their 50s and 60s, and finally rises significantly for households with heads 70 years or older; this points out the fact that there are important reallocations of total consumption as the household ages.

(b) Non-Demographic Characteristics of the Household or its Head:

(1) there is a significant inverse relationship between the household's total expenditure (one measure of permanent income) and the allocation of total consumption to shelter expenditure;

(2) households headed by a person with a French mother tongue allocate significantly less of total consumption to shelter expenditure than those with an English mother tongue.

(c) Housing Characteristics:

(1) in most cases, households living in semi-detached, row, duplex, and apartment accommodation allocate more to shelter expenditure than households in single houses, the control group; this is interesting in view of the fact that most Canadian households still aspire to live in a single house;

(2) as expected, having a mortgage significantly raises the proportion of total consumption allocated to shelter expenditure.

Given that these are four cross-sectional sets of data, this large number of regularities or consistencies is remarkable since there is always a high probability that random occurrences will influence a household's characteristics at the time of any one survey.

Are the results for controlled tests consistent with the findings in Chapter 2? In most cases they are, with the important exception of Family Composition. Looking at the interesting situation of lone-parent families in more detail, the conclusion from Chapter 2 was that they allocated a relatively high proportion of total consumption of spending to shelter while the result in Table 4-1 and described in (a)(7) is just the opposite. Although lone-parent families have relatively high proportions of total consumption allocated to shelter, the lone-parent characteristic, holding all else the same, actually lowers this proportion. What is the explanation? Clearly lone-parents have other characteristics that tend to raise the proportion of total consumption allocated to shelter, which are not controlled for in Chapters 2 and 3, where the proportion was relatively high, but are controlled here, where the variable for lone-parent reflects only the family composition situation. In terms of the regression results in Table 4-1, small households, households headed by females, households headed by someone who is divorced/separated/widowed, households with high ratios of children to adults, and households with low levels of total expenditure (i.e. low permanent incomes) tend to allocate higher proportions of total consumption to shelter; these are all characteristics of lone-parent families and caused the relatively high proportion in Chapter 2.

Another situation that is similar arises in the case of unattached individuals and married couples only. In Chapter 2, the latter had lower proportions of total consumption or spending allocated to shelter while in Table 4-1 there is no difference in 1984 and 1986, although unattached individuals do allocate higher proportions in the results for 1978 and

1982. Unattached individuals tend to have characteristics that are positively related to the proportion of total consumption allocated to shelter as exhibited in Table 4-1, which, when controlled, eliminate the family composition effect in some regressions: these characteristics are small household size, headed by a female, divorced/separated/ widowed head, more likely to be elderly, and low total expenditure (i.e. low permanent income).

The results for age in (a)(8) above are the same as for the findings from Chapter 2 where income quintile is held constant (Table 2-4), but, as noted in that chapter, differ from the uncontrolled situation. This again attests to the importance of holding income and other factors constant when the "pure" effect of age on the proportion of total consumption allocated to shelter is examined.

Two other results from Table 4-1 should be noted. First, the effect or influence of geographical location is inconsistent with respect to both sign and significance, although households in Atlantic Canada may allocate less to shelter expenditure than those in Ontario, and the opposite may be true for households in British Columbia. This tends to confirms the uncontrolled findings in Chapter 2. But the moral is: when the other independent variables are held constant or controlled, geographical location does not generally matter. Second, with respect to head's educational level, only one effect appears consistently: households in which the head has a university degree allocate more of total consumption to shelter expenditure than do all other educational groups. The results indicate a general tendency for the proportion allocated to shelter to rise with the educational attainment of the household's head, although this is inconsistent across the surveys.

Besides noting the inconsistencies in Table 4-1, there are some changes across the four years as one moves from 1978 to 1986:

(1) the influence of geographic location seems to decline, and especially the differences between Quebec and the Prairies, and Ontario; this implies that (1) the other explanatory variables account for more of the differences over the years and (2) differences in the proportion of total consumption allocated to shelter expenditure that are due just to location become less important in the 1980s; these may reflect a more uniform pattern across Canada both with respect to the other explanatory variables and the housing market;

(2) the influence of the head's level of education declines over time (with the possible exception of heads with university degrees, but even here the size of the regression coefficient falls);

(3) the effect that household size has on lowering the allocation to shelter expenditure is about the same in 1978 and 1986, but lower in 1982 and 1984;

(4) the same but opposite is true for the head's sex: greater influence on raising the allocation in the middle two years and a lower effect at the extreme years;

(5) households with heads born in the rest of the world (mainly from so-called third world countries) are increasing their allocations to shelter expenditure over time when compared to the Canadian-born headed households;

(6) recent arrivals to Canada allocate less and less to shelter expenditure, which could reflect the rising price of shelter;

(7) for the last three surveys, the influence of being a lone-parent family is declining, although the influence on the allocation of total consumption to shelter expenditure is about the same in 1986 as in 1978;

(8) still with family composition, the difference between unattached individuals and married couples only (the control group) disappears; this may reflect changes in life styles and in the composition of these two categories with people living longer and having fewer children;

(9) the difference between households whose head's age is in the 20s and whose head's age is in the 40s widens, while the difference between those in their 30s and those in their 40s disappears;

(10) although households with heads in their 70s or above always allocate significantly more of total consumption to shelter expenditure than other ages, the difference narrows as indicated by the general decline in the size of the coefficients;

(11) a rise in total expenditure (one proxy for permanent income) of, say, $1 has a greater digressing influence on the proportion of total consumption allocated to shelter expenditure in 1984 and 1986 than in the two earliest years; if we can speak of an allocation gap between the poor and the rich as income rises, then this gap is widening.

**PROPORTION OF TOTAL HOUSEHOLD INCOME BEFORE TAXES ALLOCATED TO SHELTER EXPENDITURE**

The analysis of the last section addresses a re-allocation or an allocation question: What influences a family's proportion of total consumption that is allocated to shelter expenditure instead of to other consumer goods and services? But it is interesting to also examine a household's proportion of income before taxes that is devoted to shelter expenditure; it is possible for example, that families with higher incomes may allocate a smaller proportion of total consumption to shelter expenditure but still allocate a larger proportion of income to shelter expenditure. The pattern of or influences on total consumption may be different than on total income before taxes.

A technical note or consideration became apparent soon after the analysis began. Upon closer examination of these data, the variation in the proportion of income before taxes allocated to shelter expenditure around its mean value is large; in 1984, the standard deviation of the proportion of income before taxes allocated to shelter expenditure is more than twice its mean value; in 1986, the standard deviation is more than four times the value of the mean, and one household claimed to spend 90

times more on shelter than its income before taxes! This greater volatility when income is used rather than total consumption is expected since household income is likely to vary much more than a household's total consumption; households attempt to maintain their consumption levels in the face of income changes, at least in the short-run. As well, volatility with respect to income is increased because this study utilizes cross-sectional data. Therefore, to reduce this variability and make the analysis more useful, the analysis is carried out in Table 4-2 only for households whose shelter expenditure is less than their income before taxes.

Several explanatory variables have the same effect on the proportion of income before taxes allocated to shelter expenditure as they did on the proportion of total consumption devoted to shelter expenditure: geographic location, mother tongue, household size, female headed households, divorced-separated-widowed heads, the ratio of children to adults, various types of living quarters, mortgage holding, and the level of total expenditure.

But some interesting variances appear, with perhaps age being the most interesting. Instead of allocating significantly less of total consumption to shelter expenditure (Table 4-1), households with heads in their teens and 20s allocate significantly more of their income before taxes to shelter expenditure than households whose heads have ages in the 40s (or whose heads are in their 30s for that matter). This confirms the uncontrolled finding in Chapter 2. This may reflect the fact that these youngest households have relatively low levels of income before taxes but relatively high levels of consumption. Except for 1978, at the other end of the age range, households with heads 70 years and over do not allocate more of

**TABLE 4-2**

**PROPORTION OF HOUSEHOLD INCOME BEFORE TAXES ALLOCATED TO SHELTER EXPENDITURE**
**(t-coefficient in brackets)**

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Geographic Location | | | | |
| Atlantic | -.0123<br>(1.72) | -.0065<br>(0.98) | .0036<br>(0.42) | -.0137<br>(2.30) |
| Quebec | -.0163<br>(3.64) | .0099<br>(2.32) | -.0027<br>(0.57) | .0011<br>(0.24) |
| Prairies | -.0167<br>(3.90) | .0047<br>(1.30) | .0096<br>(2.07) | .0017<br>(0.41) |
| British Columbia | .0011<br>(0.22) | .0226<br>(5.11) | .0214<br>(3.80) | .0039<br>(0.84) |
| Education | | | | |
| Some or Completed Secondary Education | .0008<br>(0.19) | .0046<br>(1.17) | -.0139<br>(2.56) | -.0058<br>(1.22) |
| Some Post-Secondary Education | .0048<br>(0.89) | .0104<br>(2.04) | -.0038<br>(0.52) | -.0050<br>(0.87) |
| Post-Secondary Certificate or Diploma | .0131<br>(2.18) | .0004<br>(0.08) | -.0282<br>(4.51) | -.0094<br>(1.70) |
| University Degree | -.0067<br>(1.22) | .0136<br>(2.60) | -.0109<br>(1.62) | -.0008<br>(0.13) |
| Not Stated | -.1084<br>(2.20) | — | .0218<br>(0.77) | -.0403<br>(1.63) |
| Mother Tongue | | | | |
| French | -.0087<br>(1.84) | -.0110<br>(2.53) | -.0040<br>(0.79) | -.0085<br>(1.77) |
| Other | .0018<br>(0.34) | .0062<br>(1.26) | -.0083<br>(1.30) | -.0049<br>(0.93) |
| Household Size | -.0069<br>(4.44) | -.0022<br>(1.26) | -.0035<br>(1.68) | -.0078<br>(4.37) |
| Female Head | .0074<br>(1.38) | .0175<br>(4.89) | .0233<br>(4.96) | .0253<br>(6.70) |

**Table 4-2** (continued)

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Birthplace | | | | |
| U.S., Northern or Western Europe | .0016<br>(0.31) | -.00003<br>(0.007 | .0107<br>(1.54) | .0009<br>(0.18) |
| Southern or Eastern Europe | .0049<br>(0.71) | -.0061<br>(0.88) | .0085<br>(0.91) | .0034<br>(0.44) |
| Rest of World | .0081<br>(1.21) | .0061<br>(0.75) | .0202<br>(1.84) | .0233<br>(2.75) |
| Time of Arrival | | | | |
| Recent | .0061<br>(0.57) | .0038<br>(0.40) | .0104<br>(0.69) | -.0113<br>(1.22) |
| Mid | — | .0066<br>(1.08) | -.0024<br>(0.31) | .0028<br>(0.42) |
| Divorced, Separated, Widowed | .0381<br>(5.86) | .0307<br>(5.51) | .0246<br>(3.26) | .0212<br>(3.75) |
| Ratio: Children to Adults | .0307<br>(7.17) | .0255<br>(5.68) | .0265<br>(5.34) | .0166<br>(4.03) |
| Family Composition | | | | |
| Unattached Individuals | .0131<br>(2.26) | .0039<br>(0.68) | .0057<br>(0.80) | -.0118<br>(1.90) |
| Married Couple Only: Youngest Child under 5 | .0131<br>(2.43) | -.0005<br>(0.08) | .0050<br>(0.73) | |
| Married Couple Only: Youngest Child 5-15 | .0027<br>(0.51) | -.0049<br>(0.89) | -.0067<br>(1.04) | .0126<br>(2.68) |
| Married Couple Only: Youngest Child 16 or Over | .0190<br>(2.45) | .0052<br>(1.12) | -.0085<br>(1.45) | |
| Married Couple with Other Relatives or Unrelated Persons | -.0033<br>(0.65) | .0109<br>(1.44) | -.0105<br>(1.26) | .0330<br>(3.96) |
| Lone-Parent Family Only | .0013<br>(0.13) | -.0258<br>(3.08) | -.0154<br>(1.38) | .0019<br>(0.20) |
| Other Composition | — | -.0069<br>(0.99) | -.0140<br>(1.66) | -.0113<br>(1.61) |

**Table 4-2** (continued)

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Age | | | | |
| ≤ 29 | .0244<br>(5.21) | .0249<br>(5.18) | .0075<br>(1.26) | .0116<br>(2.40) |
| 30 - 39 | .0144<br>(3.51) | .0110<br>(2.71) | .0043<br>(0.85) | .0032<br>(0.81) |
| 50 - 59 | -.0012<br>(0.28) | -.0119<br>(2.78) | -.0092<br>(1.64) | -.0094<br>(2.16) |
| 60 - 69 | .0119<br>(1.99) | -.0117<br>(2.16) | -.0133<br>(1.87) | -.0042<br>(0.70) |
| ≥ 70 | .0257<br>(3.05) | .0012<br>(0.17) | -.0140<br>(1.65) | .0057<br>(0.79) |
| Living Quarters | | | | |
| Semi-detached or Double House | .0139<br>(2.05) | .0109<br>(1.95) | .0243<br>(3.62) | .0143<br>(2.47) |
| Row House | .0144<br>(2.56) | .0208<br>(4.19) | .0320<br>(4.86) | .0314<br>(4.74) |
| Duplex | .0025<br>(0.39) | .0259<br>(4.12) | .0331<br>(4.50) | .0124<br>(1.77) |
| Apartment | .0202<br>(4.79) | .0165<br>(4.61) | .0365<br>(8.19) | .0361<br>(9.25) |
| Other (including rooms) | -.0627<br>(6.26) | -.0653<br>(6.59) | -.0467<br>(3.29) | -.0641<br>(6.45) |
| Homeowner with Mortgage | .0450<br>(13.81) | .0562<br>(17.89) | .0532<br>(13.48) | .0549<br>(17.04) |
| Spouse Working | -.0047<br>(1.59) | -.0120<br>(3.99) | -.0075<br>(1.91) | -.0146<br>(4.02) |
| Total Expenditure | -.0755<br>(19.21) | -.0891<br>(26.85) | -.0899<br>(20.38) | -.0918<br>(24.99) |
| $\bar{R}^2$ | .305 | .309 | .338 | .341 |
| F | 62.8 | 80.4 | 61.9 | 90.7 |

their income before taxes to shelter expenditure than younger households as was the case in Table 4-1 with allocations out of total consumption; for these oldest households, their total consumption declines relative to their total income before taxes. Other work by the researchers indicates that this age group has a relatively high savings rate; this implies the other side of the consumption issue.

It is difficult to generalize, but it appears that family composition, head's birthplace, and the time of arrival for the foreign-born are less important determinants of the allocation to shelter expenditure with income before taxes as the base instead of total consumption. It seems that the similarities between the two analyses are much stronger than the differences.

**THE PROBABILITY OF BEING AN OWNER VS. A TENANT**

The objective question here is: What increases or decreases the probability of being an owner versus a tenant in each of the four survey years? The dependent variable equals one if the household owns its living quarters and equals zero if the household rents its accommodation; mixed tenures and other types of tenure are omitted in order to keep the results as direct a comparison of owners and tenants as possible. Table 4-3 contains these probit analyses: two sets of probits were run for each of the four surveys. The first four columns include the type of living quarters as one of the explanatory variables, while the last four columns omit that variable and so do not control for its influence on the probabilities; the reason for the two sets of results will be explained later, and for now comments will be based on the first four columns; in any case, the results are very similar.

TABLE 4-3

PROBABILITY OF BEING AN OWNER

| Geographic Location | Includes Type of Living Quarters | | | | Excludes Type of Living Quarters | | | |
|---|---|---|---|---|---|---|---|---|
| | 1978 | 1982 | 1984 | 1986 | 1978 | 1982 | 1984 | 1986 |
| Atlantic | .2415<br>(1.61) | .1807<br>(1.37) | .0302<br>(0.19) | .2615<br>(2.17) | .1304<br>(1.14) | .0932<br>(0.89) | .2057<br>(1.73) | .4820<br>(5.15) |
| Quebec | -.0035<br>(0.04) | .1326<br>(1.64) | .1096<br>(1.03) | .2999<br>(3.44) | -.5523<br>(7.83) | -.3626<br>(5.66) | -.1762<br>(2.21) | -.2476<br>(3.63) |
| Prairies | -.0605<br>(0.71) | -.1868<br>(2.68) | -.2822<br>(3.23) | -.0479<br>(0.64) | .1797<br>(2.79) | .0326<br>(0.59) | .2264<br>(3.47) | .2677<br>(4.62) |
| British Columbia | .0364<br>(0.39) | -.0951<br>(1.23) | -.0741<br>(0.77) | .0312<br>(0.38) | .1112<br>(1.58) | .0080<br>(0.13) | .2304<br>(3.20) | .2789<br>(4.29) |
| Education | | | | | | | | |
| Some of Completed Secondary Education | .0754<br>(0.99) | .0123<br>(0.18) | -.0841<br>(0.99) | .2015<br>(2.70) | -.0232<br>(0.40) | .0133<br>(0.25) | .0634<br>(0.97) | .1243<br>(2.16) |
| Some Post-Secondary Education | .1813<br>(1.73) | .2108<br>(2.25) | -.0387<br>(0.34) | .3655<br>(3.62) | .1526<br>(1.93) | .2529<br>(3.41) | .0304<br>(0.34) | .2500<br>(3.16) |
| Post-Secondary Certificate or Diploma | .1161<br>(0.93) | .0878<br>(0.98) | -.1634<br>(1.43) | .2572<br>(2.73) | .0685<br>(0.72) | .1010<br>(1.42) | .1256<br>(1.42) | .1950<br>(2.64) |
| University Degree | .0965<br>(0.80) | .0372<br>(0.36) | .0331<br>(0.26) | .2594<br>(2.57) | .0139<br>(0.15) | .0323<br>(0.40) | .2126<br>(2.20) | .1702<br>(2.15) |
| Not Stated | .0111<br>(0.01) | -- | -.3170<br>(0.72) | -.1519<br>(0.48) | .0477<br>(0.06) | — | -.4221<br>(1.31) | -.5105<br>(1.66) |

Table 4-3 (continued)

| | Includes Type of Living Quarters | | | | Excludes Type of Living Quarters | | | |
|---|---|---|---|---|---|---|---|---|
| | 1978 | 1982 | 1984 | 1986 | 1978 | 1982 | 1984 | 1986 |
| Mother Tongue | | | | | | | | |
| French | .2064<br>(2.13) | -.0744<br>(0.90) | .0403<br>(0.38) | .1479<br>(1.66) | .0736<br>(0.98) | -.0802<br>(1.20) | -.0684<br>(0.84) | .1732<br>(2.46) |
| Other | .0575<br>(0.57) | .0865<br>(0.97) | .1278<br>(1.11) | .3838<br>(3.93) | .1901<br>(2.40) | .2042<br>(2.92) | .1280<br>(1.48) | .3929<br>(5.25) |
| Household Size | -.0179<br>(0.51) | -.0664<br>(1.85) | -.0603<br>(1.33) | -.1301<br>(3.52) | .1045<br>(3.46) | .0646<br>(2.10) | .0260<br>(0.70) | -.0138<br>(0.44) |
| Female Head | -.277<br>(2.79) | -.1152<br>(1.79) | .0923<br>(1.15) | .0547<br>(0.85) | -.4436<br>(5.97) | -.1128<br>(2.22) | -.1061<br>(1.71) | -.0276)<br>(0.55) |
| Birthplace | | | | | | | | |
| U.S., Northern or Western Europe | .1503<br>(1.66) | .0082<br>(0.09) | .0238<br>(0.21) | .1396<br>(1.45) | .0503<br>(0.72) | .0300<br>(0.44) | -.0947<br>(1.10) | .0355<br>(0.49) |
| Southern or Eastern Europe | .7521<br>(5.65) | .7594<br>(5.81) | .5876<br>(3.53) | .6653<br>(4.56) | .1901<br>(1.88) | .3807<br>(3.75) | .3550<br>(2.79) | .2241<br>(2.02) |
| Rest of World | .4603<br>(3.43) | .0083<br>(0.60) | .0548<br>(0.29) | .2445<br>(1.64) | -.4603<br>(4.40) | -.2829<br>(2.38) | -.1453<br>(0.99) | -.0868<br>(0.75) |
| Time of Arrival | | | | | | | | |
| Recent | -.6810<br>(2.86) | -.0006<br>(0.01) | -.1798<br>(0.73) | -.5260<br>(3.18) | -.8279<br>(4.30) | -.4981<br>(3.52) | -1.0110<br>(4.97) | -.9419<br>(7.15) |
| Mid | — | .1105<br>(0.97) | -.0644<br>(0.45) | -.2426<br>(1.96) | — | .0109<br>(0.12) | -.2190<br>(1.90) | -.2437<br>(2.51) |
| Divorced, Separated, Widowed | -.1761<br>(1.62) | -.0157<br>(0.17) | .1005<br>(0.86) | .2398<br>(2.50) | .1920<br>(2.33) | .1896<br>(2.62) | .1486<br>(1.68) | .3307<br>(4.27) |
| Ratio: Children to Adults | -.0992<br>(1.09) | -.0062<br>(0.08) | -.1703<br>(1.86) | .1794<br>(2.59) | -.0148<br>(0.20) | .0331<br>(0.52) | .0269<br>(0.36) | .2076<br>(3.72) |

**Table 4-3 (continued)**

| | Includes Type of Living Quarters | | | | Excludes Type of Living Quarters | | | |
|---|---|---|---|---|---|---|---|---|
| | 1978 | 1982 | 1984 | 1986 | 1978 | 1982 | 1984 | 1986 |
| **Family Composition** | | | | | | | | |
| Unattached Individuals | .0105<br>(0.09) | -.3147<br>(2.99) | -.5649<br>(4.33) | -.5384<br>(4.86) | -.3451<br>(4.19) | -.7543<br>(9.08) | -.7639<br>(7.57) | -.9610<br>(10.91) |
| Married Couple Only:<br>Youngest Child Under 5 | .3170<br>(2.49) | .2711<br>(2.54) | .4538<br>(3.44) | — | .5947<br>(6.07) | .4383<br>(5.07) | .4599<br>(4.41) | — |
| Married Couple Only:<br>Youngest Child 5-15 | .1858<br>(1.53) | .2927<br>(2.75) | .2890<br>(2.16) | .1813<br>(1.96) | .3979<br>(4.16) | .3384<br>(3.88) | .4719<br>(4.43) | .3682<br>(5.08) |
| Married Couple Only:<br>Youngest Child 16 or Over | -.0916<br>(0.48) | .1257<br>(1.16) | -.2248<br>(1.65) | — | .2233<br>(1.50) | .0876<br>(1.01) | .2120<br>(1.99) | — |
| Married Couple with Other<br>Relatives or Unrelated Persons | -.0620<br>(0.48) | .1022<br>(0.68) | .6445<br>(3.15) | -.1321<br>(0.88) | .1982<br>(2.00) | -.0104<br>(0.08) | .6618<br>(3.97) | .0190<br>(0.16) |
| Lone-Parent Family Only | -.0966<br>(0.54) | -.2530<br>(1.69) | -.3151<br>(1.70) | -.8621<br>(5.29) | -.2331<br>(1.70) | -.5179<br>(4.39) | -.4857<br>(3.35) | -.9775<br>(7.75) |
| Other Composition | — | -.2032<br>(1.56) | -.5031<br>(3.08) | -.6404<br>(4.88) | — | -.4694<br>(4.59) | -.3428<br>(2.81) | -.7246<br>(7.05) |
| **Age** | | | | | | | | |
| ≤ 29 | -.9704<br>(8.83) | -1.0472<br>(11.20) | -1.0440<br>(8.95) | -.9697<br>(10.61) | -1.0403<br>(12.24) | -1.0213<br>(13.67) | -1.1413<br>(12.84) | -.9902<br>(13.73) |
| 30 - 39 | -.1473<br>(1.65) | -.3431<br>(4.38) | -.4133<br>(4.22) | -.3356<br>(4.30) | -.2377<br>(3.31) | -.3137<br>(4.94) | -.3410<br>(4.51) | -.3247<br>(5.26) |
| 50 - 59 | .3525<br>(3.59) | .1750<br>(2.07) | .1607<br>(1.52) | .3003<br>(3.41) | .2263<br>(2.97) | .2736<br>(4.01) | .2054<br>(2.50) | .3299<br>(4.75) |
| 60 - 69 | .4655<br>(4.09) | .4262<br>(4.44) | .4008<br>(3.31) | .3973<br>(3.93) | .4954<br>(5.71) | .4603<br>(6.06) | .4153<br>(4.53) | .5301<br>(6.79) |
| ≥ 70 | .6776<br>(5.20) | .3995<br>(3.84) | .5306<br>(4.15) | .3372<br>(3.15) | .7127<br>(7.25) | .3851<br>(4.75) | .4708<br>(4.88) | .4314<br>(5.21) |

**Table 4-3 (continued)**

| | Includes Type of Living Quarters | | | | Excludes Type of Living Quarters | | | |
|---|---|---|---|---|---|---|---|---|
| | 1978 | 1982 | 1984 | 1986 | 1978 | 1982 | 1984 | 1986 |
| Living Quarters | | | | | | | | |
| Semi-detached or Double House | -.7333<br>(6.49) | -.9703<br>(11.32) | -1.0800<br>(9.50) | -.6934<br>(7.51) | | | | |
| Row House | -1.8587<br>(18.36) | -1.3407<br>(16.07) | -1.7321<br>(16.55) | -1.6502<br>(18.83) | | | | |
| Duplex | -1.6634<br>(15.99) | -1.580<br>(18.43) | -1.5783<br>(15.64) | -1.7703<br>(17.50) | | | | |
| Apartment | -2.8151<br>(37.66) | -2.6451<br>(42.24) | -2.7959<br>(34.77) | -2.6883<br>(40.40) | | | | |
| Other (including rooms) | .4002<br>(0.95) | .5613<br>(1.35) | .0267<br>(0.10) | .2494<br>(0.80) | | | | |
| Spouse Working | -.1194<br>(1.74) | -.0099<br>(0.15) | -.0531<br>(0.66) | -.0225<br>(0.31) | -.0564<br>(1.06) | -.0311<br>(0.60) | -.0816<br>(1.29) | -.1278<br>(2.30) |
| Income Before Taxes | .000028<br>(8.66) | .000019<br>(10.24) | .000022<br>(10.63) | .000017<br>(11.18) | .000038<br>(14.56) | .000025<br>(16.54) | .000023<br>(14.05) | .000023<br>(18.23) |

The probits enable us to see which explanatory variables raise or lower the probability that the household owns or rents living quarters. This amounts to a profile for owners, and conversely for renters. Some clearcut characteristics of these profiles emerge from the results in Table 4-3:

(1) Unattached individuals are more likely to be renters and less likely to be owners than married couples only.

(2) Lone-parent families are also more likely to be renters and less likely to be owners than married couples only; like unattached individuals, they do not have the desire, need, or wealth to be owners.

(3) As expected, married couples with children under the age of 16 are more likely to be owners and less likely to be renters than married couples only, and, by implication, unattached individuals and lone-parent families.

(4) Households with the age of the head under the age of 40 are more likely to be renters and less likely to be owners than all older age groups; since income is held constant this presumably reflects need and desire from the point of view of not needing the kind of accommodation associated with owning or not wanting the obligations that go with ownership; these differences could also reflect wealth differences that are not related to income.

(5) The higher the household's income before taxes the more likely the household is an owner and the less likely it is a renter.

(6) The type of living quarters is strongly related to owning versus renting since some types are more often owned than rented; all of the included attributes are more likely to be rented than owned when compared with single houses, so the signs are all negative; the probability of renting is especially high for apartments (no surprise), less so for a duplex or row house, and least for semi-detached.

(7) As household size increases the probability of being an owner falls and the probability of renting rises; this is surprising but recall that all other factors are held constant, including type of living quarters and family composition.

(8) For the foreign-born, two conclusions seem clear: (1) heads born in Southern or Eastern Europe are more likely to own and less likely to rent than the Canadian-born or other foreign-born, and (2) recent immigrants are more likely to rent and less likely to own than other birthplace groups.

For the other explanatory variables, the significance levels, the signs of the coefficients, or both are inconsistent across the four years; therefore there is only weak evidence to support any influence for geographical location, head's educational level, head's mother tongue, head's sex, head's status of being divorced-separated-widowed, the ratio of children to adults, or the spouse's working status.

Now attention turns to the last four columns in Table 4-3. This second set of probit analysis is motivated by two considerations. First, it is surprising that Quebec's coefficient is either insignificant or positive (in the first four columns) since that province is noted for its propensity for renting. This came out clearly in Chapter 2 where rent as a proportion of total spending or consumption was often relatively high for Quebec. This statistical result is likely caused by the fact that the type of living quarters is controlled or held constant; after that is done, the differences in living quarters in Quebec is accounted for and the Quebec location per se has no independent effect on the probabilities. That finding is interesting in itself, but it may be worth testing by omitting the type of living quarters. Second, it can be argued that including the type of living quarters almost reduces the analysis to an identity because some types are always or almost always owned and other types are almost always rented. So the probits are re-estimated omitting the variable for type of living quarters.

All of the distinguishing characteristics of owners that were noted above still appear. But some interesting new features should be noted:

(1) Geographical location now matters. Compared to Ontario, the probability of being an owner is lower in Quebec and higher in the Prairies and British Columbia; it is clear that a preference for certain types of living quarters that lend themselves to owning or renting characterize those regions or provinces.

(2) Heads with "other" mother tongues are more likely to be owners and less likely to be renters than heads with English or French mother tongues.

(3) There is somewhat stronger evidence that households headed by females are more likely to rent and less likely to own than those headed by males.

(4) Households with heads who are divorced, separated or widowed are more likely to own and less likely to rent than other marital status groups.

What a researcher controls for is sometimes a matter of taste and of the data that are available. This is a good illustration of the interrelationships among the explanatory variables, specifically type of living quarters and some other variables. Once the type of living quarters has been selected by a household, the influence of some other factors on the probability of being an owner is reduced or eliminated.

## THE ELASTICITY OF SHELTER EXPENDITURE WITH RESPECT TO TOTAL EXPENDITURE

How responsive is a household's shelter expenditure to changes in total expenditure, where total expenditure is a proxy for permanent income? The answer to this question constitutes the elasticity of shelter expenditure with respect to permanent income. The question can be stated as: for a one percent change in income (as measured by a household's total expenditure), what is the percentage change in shelter expenditure, all else the same? To calculate this elasticity, regressions are run with the log of shelter expenditure as the dependent variable and the log of total expenditure as one of the explanatory variables. The coefficient on the log of total expenditure is the estimate of the elasticity; the same set of other independent variables are used in this regression as in the previous analyses. Only the absolute value of this coefficient is used, and it can take three generic values:

(1) Greater than One: Elastic: percentage change in shelter expenditure exceeds the percentage change in total expenditure,

(2) Less than One but Greater than Zero: Inelastic: percentage change in shelter expenditure is less than the percentage change in total expenditure,

(3) Equal to One: Unit Elastic: percentage change in shelter expenditure equals the percentage change in total expenditure.

Table 4-4 contains the full regression results for the four survey years, but only the coefficients for the log of total expenditure are of direct interest here. This income elasticity is inelastic; the percentage change in total expenditure or permanent income exceeds the percentage change in shelter expenditure. The coefficient ranges between .6554 in 1984 and .5650 in 1986. This result could have been predicted from Table 4-1 where the relationship between total expenditure and the proportion of total consumption allocated to shelter expenditure was found to be inverse.

The analysis in Table 4-4 assumes that all of the various population cohorts that are represented by the other variables have the same income elasticities. If we think of the factors that can influence this elasticity, that assumption is likely to be false. At least four factors can be identified (MacMillan and Pazderka):

(1) Urgency of Need - the elasticity for necessities is hypothesized to be lower than the elasticity for luxuries, all else the same,

(2) Substitutes - the elasticity of a product with few substitute products is hypothesized to be lower than the elasticity of a product with many substitute products, all the same,

(3) Significance of Expenditure - the elasticity of a product that makes up a smaller proportion of someone's total expenditure is hypothesized to be lower than the elasticity of a product that makes up a larger proportion of someone's total expenditure, and

**TABLE 4-4**

**ELASTICITY OF SHELTER EXPENDITURE WITH RESPECT TO TOTAL EXPENDITURE**

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Geographic Location | | | | |
| Atlantic | -.0750<br>(0.94) | -.0383<br>(0.68) | -.0339<br>(0.43) | -.0055<br>(0.12) |
| Quebec | -.0641<br>(2.29) | .0547<br>(2.38) | -.0345<br>(1.01) | -.0368<br>(1.23) |
| Prairies | -.0530<br>(2.51) | .0523<br>(1.74) | -.0155<br>(0.42) | .0467<br>(1.31) |
| British Columbia | .0305<br>(1.27) | .1328<br>(5.16) | .0011<br>(0.26) | .0870<br>(2.58) |
| Education | | | | |
| Some or Completed Secondary Education | .0757<br>(2.21) | .0642<br>(2.48) | -.0336<br>(0.85) | -.0493<br>(1.43) |
| Some Post-Secondary Education | .0716<br>(1.70) | .0766<br>(2.04) | -.0521<br>(0.80) | -.0433<br>(0.96) |
| Post-Secondary Certificate or Diploma | .0865<br>(1.50) | .0596<br>(1.73) | -.0375<br>(0.87) | .0033<br>(0.10) |
| University Degree | .0356<br>(0.52) | .1040<br>(3.57) | .0046<br>(0.11) | .0137<br>(0.33) |
| Not Stated | -.8950<br>(1.81) | — | -.0923<br>(0.29) | -.6086<br>(1.13) |
| Mother Tongue | | | | |
| French | -.0986<br>(3.36) | -.0594<br>(2.92) | -.0400<br>(0.99) | -.0653<br>(2.07) |
| Other | -.0118<br>(0.44) | -.0530<br>(1.12) | -.0686<br>(1.41) | -.0593<br>(1.74) |
| Household Size | -.0344<br>(3.01) | -.0164<br>(1.70) | -.0166<br>(1.19) | -.0296<br>(3.02) |
| Female Head | .0234<br>(0.69) | .0928<br>(3.77) | .0759<br>(1.96) | .0262<br>(0.81) |

**Table 4-4** (continued)

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Birthplace | | | | |
| U.S., Northern or Western Europe | .0302<br>(0.96) | .0369<br>(1.19) | .0445<br>(0.98) | .0930<br>(2.97) |
| Southern or Eastern Europe | -.0683<br>(1.25) | .0141<br>(0.24) | .0832<br>(1.65) | .0563<br>(1.15) |
| Rest of World | .0560<br>(1.90) | .0844<br>(1.63) | .0614<br>(1.21) | .1411<br>(2.65) |
| Time of Arrival | | | | |
| Recent | .0710<br>(1.31) | -.0964<br>(0.83) | -.0041<br>(0.04) | -.0376<br>(0.73) |
| Mid | .0872<br>(2.92) | .0282<br>(0.82) | .0340<br>(0.88) | -.1329<br>(1.92) |
| Divorced, Separated, Widowed | .1032<br>(2.11) | .0921<br>(1.97) | .1503<br>(2.02) | -.0284<br>(0.48) |
| Ratio: Children to Adults | .1904<br>(4.71) | .0786<br>(3.41) | .1187<br>(3.74) | .0929<br>(2.53) |
| Family Composition | | | | |
| Unattached Individuals | .0705<br>(1.50) | -.0269<br>(0.49) | -.1169<br>(2.21) | -.0341<br>(0.64) |
| Married Couple Only: Youngest Child under 5 | -.0155<br>(0.25) | .0333<br>(1.03) | -.0067<br>(0.18) | — |
| Married Couple Only: Youngest Child 5-15 | -.0838<br>(1.65) | -.0292<br>(0.98) | -.1020<br>(2.89) | .0386<br>(0.95) |
| Married Couple Only: Youngest Child 16 or Over | -.0115<br>(0.23) | -.0422<br>(1.51) | -.1254<br>(3.71) | — |
| Married Couple with Other Relatives or Unrelated Persons | -.0866<br>(2.74) | .0274<br>(0.46) | -.0665<br>(1.44) | .0674<br>(1.58) |
| Lone-Parent Family Only | -.1270<br>(1.11) | -.1800<br>(2.20) | -.2322<br>(1.84) | -.0100<br>(0.11) |
| Other Composition | — | -.0206<br>(0.46) | -.1298<br>(1.86) | .0843<br>(1.49) |

**Table 4-4 (continued)**

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Age | | | | |
| ≤ 29 | .0595<br>(1.30) | .0709<br>(2.16) | .0707<br>(1.32) | -.0483<br>(1.02) |
| 30 - 39 | .0603<br>(1.70) | .0701<br>(2.93) | .0382<br>(0.84) | .0206<br>(0.64) |
| 50 - 59 | -.0282<br>(0.76) | -.0247<br>(1.04) | -.0234<br>(0.52) | -.0550<br>(1.69) |
| 60 - 69 | .0992<br>(1.85) | .0294<br>(0.98) | .0313<br>(0.60) | -.0433<br>(0.77) |
| ≥ 70 | .1416<br>(1.82) | .0635<br>(1.46) | .1379<br>(1.94) | .1585<br>(2.45) |
| Living Quarters | | | | |
| Semi-detached or Double House | .0872<br>(2.92) | .0887<br>(3.59) | .1206<br>(3.61) | .0617<br>(0.98) |
| Row House | .0544<br>(0.85) | .1441<br>(5.60) | .2019<br>(4.06) | .2211<br>(5.27) |
| Duplex | -.0929<br>(0.99) | .1284<br>(3.89) | .1824<br>(4.48) | .1159<br>(2.85) |
| Apartment | .1105<br>(3.05) | .0901<br>(3.20) | .2205<br>(5.85) | .2163<br>(5.42) |
| Other (including rooms) | -.7883<br>(3.31) | -.7767<br>(3.59) | -.7823<br>(2.88) | -.5559<br>(2.95) |
| Homeowner with Mortgage | .3389<br>(16.02) | .3562<br>(17.65) | .3431<br>(14.87) | .3898<br>(15.97) |
| Spouse Working | -.0142<br>(0.53) | -.0260<br>(1.22) | -.0330<br>(1.45) | .0083<br>(0.27) |
| Total Expenditure | .6527<br>(12.42) | .5739<br>(20.65) | .6554<br>(12.12) | .5650<br>(13.26) |
| $\bar{R}^2$ | .265 | .313 | .270 | .260 |
| F | 51.9 | 82.1 | 45.4 | 47.4 |

(4) Elapsed Time - the longer a person has to adjust to a change in income the greater is a product's elasticity.

These four factors can be used to hypothesize some relative elasticities among some of the cohorts represented in the study. With respect to the third factor, the proportions from Chapter 2 are appropriate here because significance in total expenditure should reflect all characteristics of a household, both demographic and non-demographic, in an uncontrolled environment. First, the income elasticity is hypothesized to be higher for the foreign-born than for the Canadian-born, all else the same. It has been shown that shelter expenditure is a more significant item in the average household's total consumption for the foreign-born than for the Canadian-born. Some foreign-born may have more substitutes for shelter expenditure in the sense that they are able to live with family and friends compared with the Canadian-born who may have different habits. Second, the recent arrivals among the foreign-born may have two offsets to these factors. Since they have just arrived in Canada, shelter and its expenditure is an extreme necessity, and since not much time has elapsed since coming to Canada, they have had relatively little time to adjust to income changes. Therefore, it is hypothesized that the recent foreign-born have a lower income elasticity than all foreign-born and probably the Canadian-born also.

Second, the income elasticity is hypothesized to be higher for older age groups than for younger age groups, all else the same. It has been shown that shelter expenditure is a more significant item in the average household's total consumption for households with heads 60 years of age or older than with younger heads. In one sense, for any given change in

income, older persons have had more elapsed time to adjust. Given their needs and desires, older persons may have more substitutes in accommodation since they can live with their children or in old age institutions.

Third, the income elasticity is hypothesized to be higher for female heads of households than for male heads of households, all else the same. It has been shown that shelter expenditure is a more significant item in the average household's total consumption for households headed by females than for those headed by males. It is not obvious that the other determinants of elasticity are different between males and females after other things are held constant.

Fourth, the income elasticity is hypothesized to be higher for lone-parent families than for other family compositions, all else the same. It has been shown in Chapter 2 that shelter expenditure is a more significant item in the average household's total consumption for lone-parent families than for other family compositions. Also, lone-parent families may be more likely to live with another family and therefore have more substitutes among shelter types than other family compositions.

Fifth, the income elasticity is hypothesized to be higher for married couples with children than for married couples only, all else the same. This is predicated on the factor of substitutes. As households have children, they can increase the substitutes for raising shelter expenditure with income by doubling up children in bedrooms, for example. These types of economies of scale for a household are really just increases in the substitutes for spending more on shelter.

Sixth, the income elasticity is hypothesized to be higher for unattached individuals than for married couples only, all else the same. It was shown in Chapter 2 that unattached individuals allocated the highest

proportion of total expenditure of any family composition group to shelter; they should be more sensitive to changes in income. Also, since unattached individuals are relatively young or relatively old, they may have more substitutional possibilities in their shelter expenditures and therefore be more sensitive to income changes.

Seventh, the income elasticity is hypothesized to be higher for low income groups than for high income groups, all else the same. It has been shown in Chapter 2 that shelter expenditure is a more significant item in the average household's total consumption for lower income households than for higher income households. On the other hand, with low incomes, shelter must be in the category of a necessity, and as income rises the income elasticity may rise as shelter becomes more of a luxury (at least some aspects of shelter are like luxury goods).

In order to test these seven hypotheses, ordinary least squares regressions are calculated for only the 1986 data set (time precludes doing the tests for all four years) with the log of shelter expenditure as the dependent variable and the log of total expenditure as one independent variable. Separate regressions are run for each of the groups implied in each of the hypotheses; the coefficients on the log of total expenditure are recorded in Table 4-5, and all are significant at the .05 level or better.

All the hypotheses are supported by the results:

(1) the income elasticity of the foreign-born (.649) is higher than for the Canadian-born (.542),

(2) the income elasticity for recent foreign-born (.520) is lower than for all foreign-born (.649),

(3) the income elasticity is higher for the two oldest age groups (.662 and .669) than for younger age groups,

**TABLE 4-5**

**ELASTICITIES FOR SOME SUB-GROUPS, 1986**

| Income Group | |
|---|---|
| < 15,600 | 1.207 |
| 15,600-27,309 | .389 |
| 27,310-40,122 | .444 |
| 40,123-56,005 | .478 |
| > 56,005 | .668 |

| Geographical Location | |
|---|---|
| Atlantic | .490 |
| Quebec | .485 |
| Ontario | .641 |
| Prairies | .531 |
| B.C. | .540 |

| Family Composition | |
|---|---|
| Unattached Individuals | .579 |
| Married Couples Only | .491 |
| Married Couple with Children | .689 |
| Lone-Parent Families | .751 |

| Age Groups | |
|---|---|
| < 30 | .441 |
| 30-39 | .565 |
| 40-49 | .597 |
| 50-59 | .413 |
| 60-69 | .662 |
| > 69 | .669 |

| Birthplace and Arrival Year | |
|---|---|
| Canadian-Born | .542 |
| Foreign-Born | .649 |
| Recent Foreign-Born | .520 |

| Head's Sex | |
|---|---|
| Females | .719 |
| Males | .480 |

(4) the income elasticity for female headed households (.719) is higher than for male headed households (.480),

(5) the income elasticity for lone-partents (.751) is higher than for all other family composition groups,

(6) the income elasticity for married couples with children (.689) is higher than for married couples only (.491),

(7) the income elasticity for unattached individuals (.579) is higher than for married couples only (.491),

(8) the income elasticity for the lowest income quintile (1.207) is higher than for any other income quintile, and

(9) the income elasticity rises from the second income quintile to the fifth income quintile.

Of course all of these elasticities are the net result of several influences including ones other than the four determinants considered here. However, the hypotheses are generally supported.

**CONCLUSION**

The material in this chapter shows clearly that demographic variables, even when other factors are held constant, have significant influences on the proportion of total spending of income allocated to shelter, and on the probability that a household will own or rent its living quarters. As factors causing the proportion of total consumption allocated to shelter to change, household size, female headship, and the ratio of children to adults are always important. At times, some aspects of family composition and the head's age group enter as influences, and birthplace of the head seems to be the least important demographic variable when other factors are held constant.

Things are slightly different for the probability of being an owner. Family composition and the head's age appear as more significant influences. The ratio of children to adults, household mix, and a female head are often significant but not as dominant as with spending allocations. Birthplace of the head is more often important.

# CHAPTER 5

## OBSERVATIONS AND CONCLUSIONS

The data contained in Chapters 2, 3 and 4 need interpretation and explanation if they are to be viewed as being relevant for housing policy and that is, of course, the ultimate goal of research being carried out under the sponsorship of CMHC, even though this particular research project is not intended to recommend policy.

For instance, it would make little sense to argue for greater assistance to families of two adults and two children, if on average they are able to afford to purchase housing because they are currently spending less than 25 per cent of their before-tax incomes or of their total expenditures on shelter. On the other hand, CMHC and others have adopted a general guide that to spend more than 30 percent of income on shelter and related items is beyond a family's means and that there ought to be assistance to those families in handling their housing expenditures or alternatively, the cost of housing should be lowered in order to bring it within the "affordable" price range. We, therefore, will examine which groups have spending on shelter that is greater than 30 percent.

In addition, there is the need to examine the significance of our results, particularly tying together the micro evidence with the macro evidence on spending on housing. From that exploration, some issue must be addressed as to policy implications. The regression results as well as the elasticity results give us some powerful indications regarding housing markets.

Further, there is some discussion here regarding dwelling types and the likely shifts in demand for these dwelling types as the demographic structure of the Canadian population changes. The dwelling type and also the decision about tenure could make a drastic difference to the construction and resale housing markets. In general, younger people demand apartments and rental units, whereas older individuals demand single family housing and owned units, including owned apartments.

It is also possible to see, for instance, that the population is aging and that Canada has been permitting a greater number of immigrants since 1985. Further, the immigration has been from particular countries in Asia, which was not experienced twenty years ago to the same extent. As the demographics change, we could take a distribution of spending in 1984, for instance, and assume no other change but a demographic one and find what spending would be in 2001 (assuming constant prices). While such an exercise does not add significantly to our knowledge as too many other things are likely to change in the interval, it can shed some light on directions which policy could take in order to accommodate the changes or to counteract such changes.

The population projections that are presented in the next section of this paper imply that the two oldest age groups (60-75 and 76 or older) might constitute 23 percent and 6 percent respectively of total households by 2001; that leaves 71 percent of households with heads in the remaining age groups and the sampling in the two sets of data are moving in that direction.

If average expenditure stays the same as reflected by the proportions for 1984, what will be the changes in total expenditure on each of the important categories of spending because of changes in the percentage of

the population in each age group? Table 5-1 presents the total expenditure for the largest categories combining the 1984 household expenditure distributions, with the 2001 age distributions. Note that the simulation for 2001 is not meant to project expenditures to that date. but instead to see what expenditures would be with the hypothesized 2001 age distributions of households and average spending levels of 1984, assuming no other changes.

From Table 5-1, it is evident that total expenditure on all consumption items would be lower with the hypothesized 2001 distribution than with the actual 1984 distribution of households in the three age groups. It is interesting that even in the case of shelter, where the two older age groups allocate significantly more of their total expenditure, the total spending on shelter would fall. With households with heads under the age of 60 still making up 71 percent of all households and their total expenditure on average being one and a half to two times higher than older households, this groups decline as a percentage of the total pulls down total expenditures more than enough to compensate for the shift in household distribution to the two older age groups with their greater proportion of total expenditure allocated to shelter. So even though older households have different consumption patterns than households headed by younger persons, total expenditure on specific consumer items is dominated by the much higher absolute levels of total income and thus total expenditure on all items of the younger households and by the fact that they still constitute over 70 percent of all households. Of course with the 2001 household distribution, the two older age groups will constitute larger percentages of total expenditure on each of the consumer items.

Table 5-1

**TOTAL DOLLAR EXPENDITURE BY CONSUMPTION ITEM BASED ON 1984 DISTRIBUTION OF THE EXPENDITURE DOLLAR AND 1984 AND 2001 POPULATION DISTRIBUTIONS**
**(in thousands of dollars)**

| | 1984 Distribution | 2001 Distribution | Percentage Difference |
|---|---|---|---|
| Food | 19,227,240 | 18,823,941 | -2.1 |
| Shelter | 22,862,891 | 22,408,647 | -2.0 |
| Household Operation | 5,405,559 | 5,266,220 | -2.6 |
| Household Furnishings | 4,682,693 | 4,528,740 | -3.3 |
| Clothing | 8,325,948 | 8,028,157 | -3.6 |
| Transportation | 15,776,019 | 15,417,905 | -2.3 |
| Recreation | 6,435,015 | 6,238,539 | -3.1 |

**CANADA'S DEMOGRAPHIC FUTURE:**

There has been an aging of the Canadian population. Foot (1982) and Marr and McCready (1989) have looked at the combination of the effects of Canada's experience with fertility, mortality, and migration on the age of the Canadian population. In 1961, the average age in Canada was 26.3 but by 1981, that had risen to 29.5 and is expected to rise to 36.9 by 2001 and 42 by 2031. Quebec, Ontario, Manitoba, and British Columbia had average ages higher than the national average in 1981.

David Foot (1982) assumes a fertility rate for Canada of 1.75 births per woman and net international migration to Canada of 25,000 per annum. Canadians will know that since 1982, net immigration has averaged 61,716 per annum and has been increasing. By 2001, Canada's population would increase to about 27.5 million but would start to decline sometime in the thirty years after that and it would fall to about 25.4 million by 2051; this implies a population growth rate of 0.84 from 1981 to 1991, of 0.46 from 1991 to 2001, and -0.16 from 2001 to 2051. The population's mean age would rise from 29.5 years in 1981 to 36.9 years in 2001 and to 42.0 years in 2051. In 1981, 22.5% of the population was in age group 0-14 years, 67.8% was in th 15-64 age groups, and 9.7% was 65 years and older; by 2001, these age groups change in Foot's estimations to 19.4%, 68.3%, and 12.3% respectively. The changes are even more dramatic by 2051: 16.4%, 62.9%, and 20.7%. Note the rise in the proportion of the population over age 64. As the years pass, net immigration accounts for a larger and larger percentage of Canada's population growth and the potential exists for a change in the age distribution if immigrants bring with them a change in fertility rate or if they themselves are largely in their younger years.

One set of projections from Statistics Canada (Fertility in Canada: From Baby-boom to Baby-bust) assumes a total fertility rate of 1.5 births per woman and net immigration of zero. The Canadian population reaches about 26 million in 2001, continues to rise for a few more years, and then declines to approximately 18.6 million in 2051. This is a more "severe" projection than Foot's in the sense that the population rises less, peaks sooner, and is significantly smaller in 2051; these results are caused by lower fertility and net immigration rates in Statistics Canada's projection. In 2001, 17.2% of the population is in the age range 0-14, 70.2% is in the groups 15-64, and 12.6% are 65 years and older; by 2051. The corresponding percentages are 13%, 61.2%, and 25.8%. The population's mean age would increase from 33.1 years in 1981, to 38.2 years in 2001, to 46.2 years in 2051.

In Population Projections for Canada, Provinces, and Territories 1984 to 2006 (1985), Statistics Canada presents a projection with assumptions which are quite close to the present situation: a fertility rate of 1.66 children per woman by 1996 and net international migration of 50,000 per year. By 2001, Canada's population would rise to about 28.5 million with a relatively low per annum growth rate. By that year, 18.7% of this population would be between the ages of zero and 14, 67.8% would be in the age range 15 to 64, and 13.6% would be age 65 or older.

Finally, Frank Denton and Byron Spencer (Population Change and the Canadian Economy) present their "medium assumption" projection with a total fertility rate of 1.7 and 50,000 net immigrants per year. As with the last Statistics Canada projection' population would reach about 28.5 million in 2001; its growth rate would decline steadily although it would remain

positive until the late 2020s when Canada's population would start to decline. The percentage of the population under 20 years of age would fall from 28.9% in 1986 to 25.5% in 2001 and to 20.3% by 2036; the percentage in the age group 20 to 64 would rise slightly to 61.1% in 2001 from 60.5% in 1986 but would decline to 54.6% by 2036. People 65 years or older would increase from 10.7% of the population in 1986 to 13.4% in 2001 and to 25.1% in 2036. The outcome of the four projections noted above are the same for population over the next seventy years:

(1) the population will rise slowly over the next twenty to forty years and then will start to decline;

(2) the mean age of the population will increase; and

(3) the percentage distribution will change: people under age 20 or so will make up a smaller percentage of the population, those 65 years or older will make up a larger percentage of the population, and persons of working age will constitute a slightly higher percentage of the population until the early 21st century and then this percentage will decline.

These are reflected in Table 5-2 which is an aggregate of past age changes with those predicted by Foot.

According to Statistics Canada in 1987, the percentage of the population aged 65+ grew from 7.6 percent in 1961 to 10.6 percent in 1986 while the group aged 0 - 14 decreased from 33.9 percent in 1961 to 21.3 percent in 1986. Thus, we see a drastic shift in the make-up of the Canadian population and, as we shall see in this chapter, this population shift carries implications for per capita spending on shelter.

The average-sized family also changed over the period 1961 to 1981, from 3.9 to 3.3. While the number of individuals in families has increased so that in 1981 there were 20,602,630 people in 6,324,975 families or about

Table 5-2

**MEDIAN AGE FOR CANADA, AND FOR THE PROVINCES 1921-1981 PROJECTIONS, CANADA ONLY 1991-2051**
(in years)

| Census Year | Canada | Nfld. | PEI | NS | NB | PQ | Ont. | Man. | Sask. | Alta. | BC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1921 | 24.0 | -- | 24.8 | 23.7 | 22.3 | 20.9 | 26.8 | 22.8 | 21.3 | 23.5 | 29.8 |
| 1931 | 24.8 | -- | 25.0 | 24.2 | 22.4 | 22.1 | 27.8 | 24.2 | 22.0 | 24.0 | 30.6 |
| 1941 | 27.1 | -- | 25.9 | 25.9 | 24.1 | 24.1 | 29.9 | 27.4 | 24.9 | 26.3 | 32.1 |
| 1951 | 27.7 | 21.7 | 26.2 | 26.5 | 24.3 | 24.8 | 30.1 | 29.0 | 27.4 | 27.0 | 32.0 |
| 1961 | 26.3 | 19.3 | 24.5 | 24.9 | 22.4 | 24.0 | 28.4 | 27.7 | 26.6 | 25.4 | 29.8 |
| 1971 | 26.2 | 20.7 | 24.8 | 25.4 | 23.9 | 25.6 | 27.2 | 26.8 | 26.7 | 24.9 | 27.9 |
| 1981 | 29.5 | 25.0 | 28.5 | 28.9 | 27.8 | 29.7 | 30.2 | 29.7 | 28.8 | 27.4 | 30.7 |
| 1991 | 33.0 | | | | | | | | | | |
| 2001 | 36.9 | | | | | | | | | | |
| 2011 | 39.3 | | | | | | | | | | |
| 2021 | 40.5 | | | | | | | | | | |
| 2031 | 42.0 | | | | | | | | | | |
| 2041 | 42.4 | | | | | | | | | | |
| 2051 | 42.0 | | | | | | | | | | |

Source: Canada. Statistics Canada. Population by Sex and Age, 1921-1971, 1981 and projection by David K. Foot, Canada's Population Outlook: Demographic Futures and Economic Challenges. Toronto: James Lorimer & Company, 1982. Table 3-9.

85 percent of the Canadian population lived in families, one cannot ignore the changing structure of those families.

There has been a reduction, for instance, in the number of extended family living arrangements where the parents/grandparents live with the younger generation. While the data are not very good, this phenomenon has been going on since the second world war because of a more mobile society, but it could also be affected by the housing being constructed and increasing urbanization.

Further, there is evidence of an ever-increasing number of single-parent families. Not only has divorce and death created these one-parent families, but it has also become more acceptable to use artificial means of procreating to create a family without the "benefit of a spouse". There are both men and women who have adopted children and there are women who have opted to become impregnated without any intention of giving the biological father any parental role in either finance or in upbringing.

There is evidence of an increasing number of two-income families. For instance, in 1979, 64 percent of married women aged 20 - 24, 57 percent of married women aged 35 - 44, and 55 percent of married women aged 25 - 34 were in the work force. Compare this to the 29 percent of married women aged 55 - 64 in the work force. As this trend continues, decisions about housing and other expenditures are affected.

It is clear from Table 5-3 that expenditures on shelter as a proportion of total spending is highest for those families in which neither spouse is working. This is consistent with the results of earlier tables in Chapter 2 which suggest that the elderly spend a large portion of total spending on housing. In this case, in 1984 the proportion exceeded 30 percent.

**TABLE 5-3**

**PROPORTION OF TOTAL SPENDING ON SHELTER AND HOUSING RELATED EXPENDITURES BY SPOUSE WORKING**

| | 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|---|
| Shelter: | | | | |
| No one working | .219 | .291 | .311 | .289 |
| One spouse working | .198 | .160 | .157 | .147 |
| Both spouses working | .168 | .168 | .170 | .158 |
| Principal Accommodation | | | | |
| No one working | .. | .285 | .305 | .281 |
| One spouse working | .. | .149 | .150 | .138 |
| Both spouses working | .. | .159 | .161 | .149 |
| Rental Quarters | | | | |
| No one working | .058 | .137 | .186 | .159 |
| One spouse working | .059 | .043 | .062 | .058 |
| Both spouses working | .068 | .036 | .050 | .038 |
| Rent | | | | |
| No one working | .. | .133 | .183 | .156 |
| One spouse working | .. | .042 | .061 | .057 |
| Both spouses working | .. | .035 | .048 | .037 |
| Owned Living Quarters | | | | |
| No one working | .078 | .072 | .063 | .060 |
| One spouse working | .079 | .067 | .055 | .049 |
| Both spouses working | .064 | .089 | .082 | .081 |
| Property Taxes | | | | |
| No one working | .. | .035 | .029 | .028 |
| One spouse working | .. | .019 | .019 | .017 |
| Both spouses working | .. | .019 | .018 | .018 |
| Mortgage Interest | | | | |
| No one working | .. | .005 | .007 | .005 |
| One spouse working | .. | .027 | .017 | .017 |
| Both spouses working | .. | .050 | .044 | .040 |
| Maintenance, Repairs | | | | |
| No one working | .. | .018 | .016 | .013 |
| One spouse working | .. | .011 | .011 | .008 |
| Both spouses working | .. | .010 | .010 | .010 |

Note: .. signifies that data are unavailable in the survey for the specific year under consideration.

When comparing families in which only one spouse works to families in which both spouses work, the large differences occur in mortgage interest which then shows up in the aggregate owned living quarters. Here two-earner families spend considerably more than one earner families, and again that is consistent with the ages listed above for married women in the workforce. One earner families would be predominantly in the over 50 age group. These families consistently paid out less as a percentage on housing than younger households, in which both spouses are more likely to be working.

From 1961 to 1985, Canada accepted on average 134,388 immigrants and lost on average 69,266 to emigration. Since 1985, there has been a continuous increase in the number of immigrants so that net immigration has increased and is predicted to increase still further in the next decade. In 1984, approximately half of all immigrants arriving were from Asia. It is expected that this trend will continue for the next number of years.

Since more immigrants have extended families living under one roof relative to the Canadian-born, and there are fewer single-parent families in some immigrant groups, there will be varying influences on spending patterns, the higher the immigration rate. In fact, as we saw in the regressions in this study, those who were foreign-born (with one exception being those from Southern or Eastern Europe in 1978) were likely to spend more as a proportion of total spending.

**THE 30 PERCENT FIGURE:**

It is of interest to go back to Chapter 2 and note that there are very few instances when families are devoting more than 30 percent of their

total spending to shelter (broadly defined). To list them, we would have to include:

i) over 70 years of age in 1982, 1984, and 1986.
ii) lowest quintile at every age in 1984.
iii) lowest quintile, 30-39 and over 70 in 1986.
iv) lowest quintile, over 70 in 1982.
v) unattached individuals in 1982 and 1984.
vi) families in which neither spouse was working in 1984.
vii) immigrants who arrived in 1971-75 in 1984 and 1983-86 in 1986.

As we discuss these categories where on average more than 30 percent of total spending is devoted to shelter, we have to ask ourselves whether there is a problem here or whether there are some general ameliorating factors involved?

Those who are over age 70 may, for example, have wealth but not current income, which may make their spending less of a problem then might at first be thought. Also, in some other work which the authors have done, it was this group which saved the most, indicating that their other spending was lower. Since it is hard to reduce shelter expenditures, the proportion devoted to shelter is higher. Also, note that as a percent of before-tax income, this group is not in the over 30 percent spending category.

On the other hand, the evidence that female-headed households experienced spending of greater than 30 percent of before-tax income may be of much greater concern. (Here, spending on housing is not 30 percent of total spending, indicating that this group spends in total less than 100 percent of income). First, the proportion of households that are female-headed is increasing over time, and the fact that many of these individuals have children in the home and have very little in the way of traditional support systems means that social policy must look further at this group of

households. There is some suggestion that wage equity will reduce the problem, but it may take more than that since included in these households are elderly widows, and those without job skills, and those who choose not to be connected to the labour market because of age or children. Thus, pensions for spouses (including the Canada Pension Plan) and job training may be an indirect part of housing policy in that one can either deal with the denominator, i.e., the income level of the household head, or one can deal with the numerator, i.e., the amount spent on housing.

Some of the same considerations may also be present for unattached individuals. In fact, the elderly widows would be in both groups. However, amongst unattached individuals, we also have some single young people who are on their first job or attending school/college/university and are not expected to be considered anything but poor. For them, some housing (perhaps too little) has been provided at universities but not a great deal has been done at community colleges. In any case, the policy choice may be to provide more institutional housing in connection with educational institutions.

The other group that spends more than 30 percent of total spending on housing are the lowest income quintile households in Canada. This became more or a problem in the 1980s than it had been in 1978, reaching a peak in 1984. It remains a problem for two different age groups in 1986. It would appear that the problem is again not as serious for the older age group although single widowed females may have a place in policy setting. The real problem is when there are households (such as the 30-39 year olds in 1986) who cannot afford adequate housing. By the time the household head is 30, the family ought to be past its period of lowest income and be able to afford to spend on housing. The fact that this group spent more than 30

percent on shelter in 1986 suggests that they were heavily mortgaged and down to one income (in the case where families have one spouse stay home in order to raise children when the children are young) or it may indicate a problem with having enough affordable housing. More research is needed on this group of families to see if there are clear indications as to the reasons for their high spending on shelter, relative to total spending.

**DWELLING TYPES:**

A discussion of dwelling types might be appropriate at this juncture. It will be noted that rental expenditures (under tenure) are almost always higher as a proportion of total spending than are expenditures on owned housing with or without mortgage. That has not changed over the four years that we examined, despite the fact that Ontario had over the whole period a policy of rent controls. It could be hypothesized that the reason for this is not the expense of rent itself but rather the type of people who inhabit rental units. Specifically, there is a number of low income people amongst renters and thus with a smaller denominator, the proportion will appear high.

This becomes evident if the shelter expenditure by living quarters by tenure is examined. Specifically, regular tenants spend more as a proportion of total spending whether they are living in single detached housing, semi-detached housing, row housing (although here those with mortgages come close to regular tenants), duplex, or apartment. In other words, it does not matter what type of housing the family lives in, the fact that they are renting tends to mean that they are spending a larger share of their total spending dollar on shelter. One could then ask why they are renting a

single family home, for instance. The answer may be that they cannot afford a down payment to buy such a home, which would show up in a smaller denominator in calculating the proportion.

An exploration of the age distribution and the income distribution of those living in different types of dwellings or having different tenures would give us an ability to answer some concerns about what future demand might be for different dwelling types (living quarters in the parlance of the family expenditures surveys) and for different tenures.

**SHIFTS IN EXPENDITURES ON SHELTER AS DEMOGRAPHICS CHANGE:**

There have been some attempts in the past to calculate the shifts that would occur in spending as one changes one of the demographic factors, holding everything else constant.

Thomas Espanshade (1978) concluded that a fall in the United States population that was under the age of 15 would increase per capita expenditure on durables. Espanshade finds that a transition to an older population with fewer persons per household decreases average housing expenditures per capita by about 2 percent. Richard Parks and Anton Barten (1973), using data from 14 O.E.C.D. countries, found the same quantitative changes in durable spending if the age shifts from the 0-9 age group towards the 20-64 age group or if the 10-19 age group shifts towards the 65+ age group. Parks and Barten found in their study that a shift to an older population leads to a decline in per capita shelter cost. Marr and McCready (1989) found that a one percent shift out of ages 0 - 14 or 15 - 24 towards ages 65+ would reduce real per capita expenditure on shelter by $24.57 and $33.39 respectively. Also, if there were a one percent shift in the

population aged 25-64 to ages 65+, there would be a real per capita drop in spending on shelter of $30.04.

In other words, as the population grows older, there can be an expectation that per capita expenditure on shelter will decrease but that as a proportion of total spending, it will become a more significant item in the budget. Of course, it will be many years before Canada experiences a shift from the 24-64 age group towards the 65+ age group. As we saw in our discussion of demographic trends, there has been and will continue to be a decline in the proportion of the population aged 15 and under, but for some time, the proportion of the population in the 25 - 64 age group will be larger than it has been since the second world war. While the number of people aged 65+ continues to increase at an increasing rate, it will not be until sometime after 2011 that the proportion of the population aged 25 - 64 decreases while the proportion over 65 increases. In the meantime, the shift is from the younger age groups to both the 25 - 64 and 65+ age groups with mixed results as to housing expenditures, for as the shift from the younger age groups to the 25 - 64 age group occurs, there is a slight decrease (-$5.47) in per capita spending (if the younger age group is 0 - 14) or a slight increase in per capita spending (+$3.35) if the younger age group is 15 - 24.

**SHIFTS IN SHELTER EXPENDITURES AS INCOMES CHANGE:**

Using the results of our income elasticities in Chapter 4, we can see that for the lowest income quintile, the income elasticity of shelter expenditures is greater than one indicating that a one percent rise in income leads to more than a one percent rise in housing expenditure. For

all other income quintiles, the income elasticity is positive, but less than one, suggesting a rise in income leads to a rise in housing expenditure but a smaller percentage than the rise in income. For the highest income quintile, the elasticity coefficient is .668 which suggests a one percent rise in income leads to a .67 percent increase in housing expenditure.

What is most interesting about Table 4-5 is the fact that the groups which are spending large amounts on housing already as a proportion of their total spending, the one-parent families, female-headed families, and those aged 70+ all have relatively high income elasticities of demand which suggests that they would spend heavily on more housing if they had higher incomes. Similarly, those married couples with children would also put an increase in income into more housing expenditure if given the opportunity (at least to a larger extent than would married couples without children or unattached individuals).

**THE SIGNIFICANT FACTORS IN THE REGRESSIONS**

The programme that generated the regression results for Chapter 4 also calculates standardized coefficients that adapt each variable for its units; these coefficients can be used to compare the relative importance of each variable in the explanation of the dependent variable. Tables 5-4 and 5-5 rank the most important explanatory variables for the proportion of total consumption allocated to shelter and for the proportion of total household income before taxes devoted to shelter. For both, it is perhaps not surprising that the measure we have used for permanent or long term income, total expenditure of the household, and the presence of mortgage payments are the two most important determinants. But for the purpose of

## TABLE 5-4

## MOST IMPORTANT DETERMINANTS OF THE PROPORTION OF HOUSEHOLD INCOME ALLOCATED TO SHELTER EXPENDITURE

| 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|
| Total Expenditure | Total Expenditure | Total Expenditure | Total Expenditure |
| Mortgage Payment | Mortgage Payment | Mortgage Payment | Mortgage Payment |
| Child/Adult Ratio | Child/Adult Ratio | Apartment | Apartment |
| Divorced/Separated | Divorced/Separated | Child/Adult Ratio | Female Head |
| Household Size | Age ≤ 29 | Female Head | Household Size |
| Age ≤ 29 | Other Living | Divorced/Separated | Other Living |
| Apartment | Female Head | Post-Sec Certificate | Child/Adult Ratio |
| Other Living | Apartment | Duplex | Divorced/Separated |
| Age ≥ 70 | B.C. | B.C. | Row House |

TABLE 5-5

MOST IMPORTANT DETERMINANTS OF
TOTAL CONSUMPTION ALLOCATED TO SHELTER EXPENDITURE

| 1978 | 1982 | 1984 | 1986 |
|---|---|---|---|
| Total Expenditure | Total Expenditure | Total Expenditure | Total Expenditure |
| Mortgage Payment | Mortgage Payment | Mortgage Payment | Mortgage Payment |
| Household Size | University Degree | Apartment | Household Size |
| Child/Adult Ratio | Other Living | Household Size | Apartment |
| Other Living | Household Size | Other Living | Child/Adult Ratio |
| University Degree | Age ≥ 70 | University Degree | Other Living |
| Age ≥ 70 | Child-Adult Ratio | Child/Adult Ratio | University Degree |
| Unattached Indiv. | Female Head | Female Head | Age ≥ 70 |
| Post-Sec. Certificate | Lone-Parent | Divorced/Separated | Divorced/Separated |
| Some Post-Sec. | B.C. | Duplex | Row House |

the present study, it is interesting that several of the demographic variables appear consistently in all lists. This attests again to the study's central finding: demographic structure had and will have an important influence on households' allocations of total spending or of income to shelter expenditures.

A few of the demographic variables demonstrate noticable patterns across the four years as to their ranking for the proportion of household income before taxes allocated to shelter expenditure. The child to adult ratio and a divorced/separated head of household decline in the rankings, while living in an apartment (this is not a demographic variable but still an interesting result) and female headship rise in the rankings. The latter group is a vulnerable population that is having to allocate increasingly greater proportions of household income to shelter over time, an income that in many instances is relatively low. The rising importance of apartment dwelling may reflect the relative scarcity of that type of accommodation; controls of various kinds have limited supply and conversions to condominiums have taken some apartments off the market.

## CONCLUSION

In this study, there are many possibilities for developing tables since the data set is extremely rich. However, as indicated in the Introductory Chapter, our purpose has been to examine the relationship between demographic factors and housing expenditures. We conclude by reiterating that the Canadian population is expected to age, more immigration is likely, and more single-parent families are likely to exist. Smaller

families, more families with a female head, and more families in which both spouses work are also expected.

As we have seen, the elderly spend a greater portion of income (current or permanent) on housing and the change towards more in this age group will mean a larger portion of societal income going towards housing. Also, female-headed households spend more on housing as do families in which both spouses work.

Smaller families, with a lower child/adult ratio, imply lower spending. Immigration does not lead to significant variance in spending on housing although in the first years in Canada, there is (at least in 1986) a significant increase in spending as a proportion of income, although this does appear to be significant in our regression results.

We thus have shown a justification for looking at demographics in the determination of spending for housing.

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